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and OPERATION & MAINTENANCE

MARCH 1930

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DODGE TRUCKS

One compelling reason for the universal use of motor trucks is this: They save time. And time saved is money saved .... In terms of work done, trips made and time saved, Dodge Trucks are out and out savers—money savers, money earners. Proof is speedily found by inspection and test of any type—from the ½-ton to the 3-ton.

TL1
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DURABILITY
ECONOMY
POWER
SPEED

A new line of Durant-built Rugby Trucks, embodying these fundamentals of truck excellence, will be announced in the April issue.

RUGBY

A GOOD TRUCK - BUILT BY DURANT

35

Pat 2-8
2116l
582

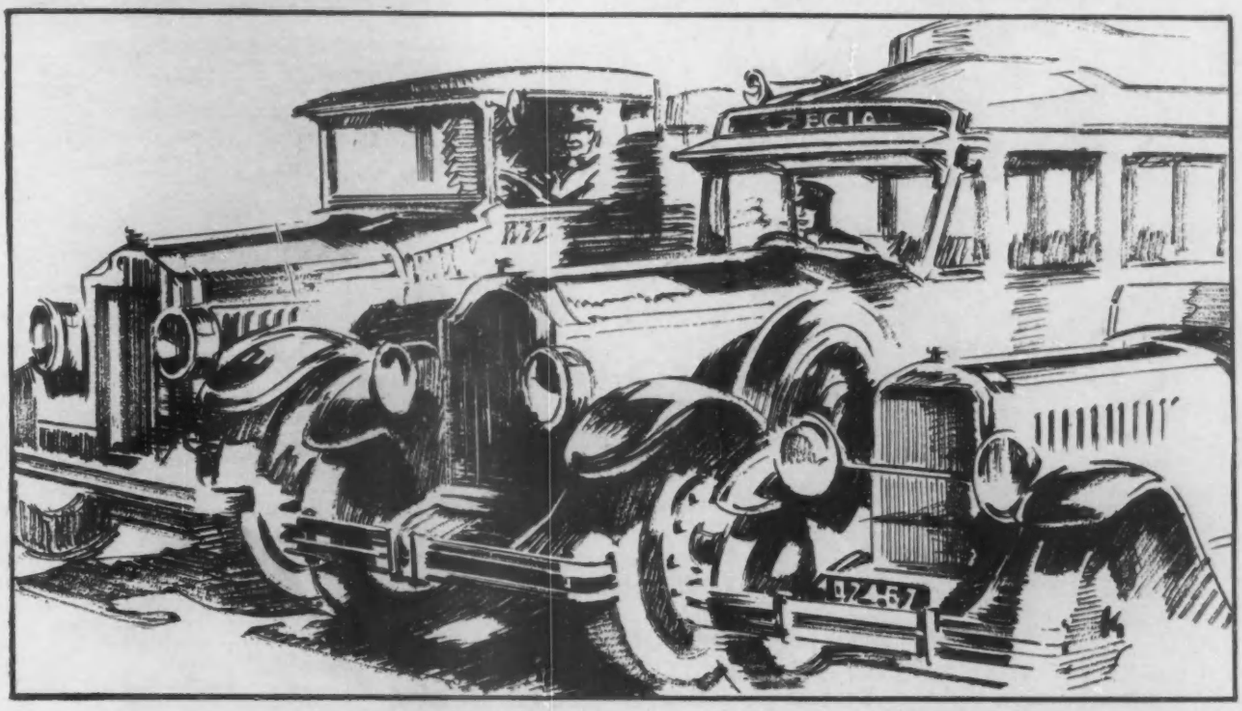
Silence . . . in cars, trucks, and busses . . . indicates smoothness.

As the noise vanishes . . . so does friction, wear, and replacement. Quiet comes with the application of Hyatt Quiet Roller Bearings at all strategic positions in the chassis.

17

To shafts and gears . . . HYATT brings quiet

Hyatts have been part of popular automotive units for more than a quarter century. This practice of relying upon Hyatt quality over



a period of years is unmistakable evidence that Hyatt Quiet Roller Bearings contribute materially to the greater satisfaction of the ultimate owner.

HYATT ROLLER BEARING COMPANY

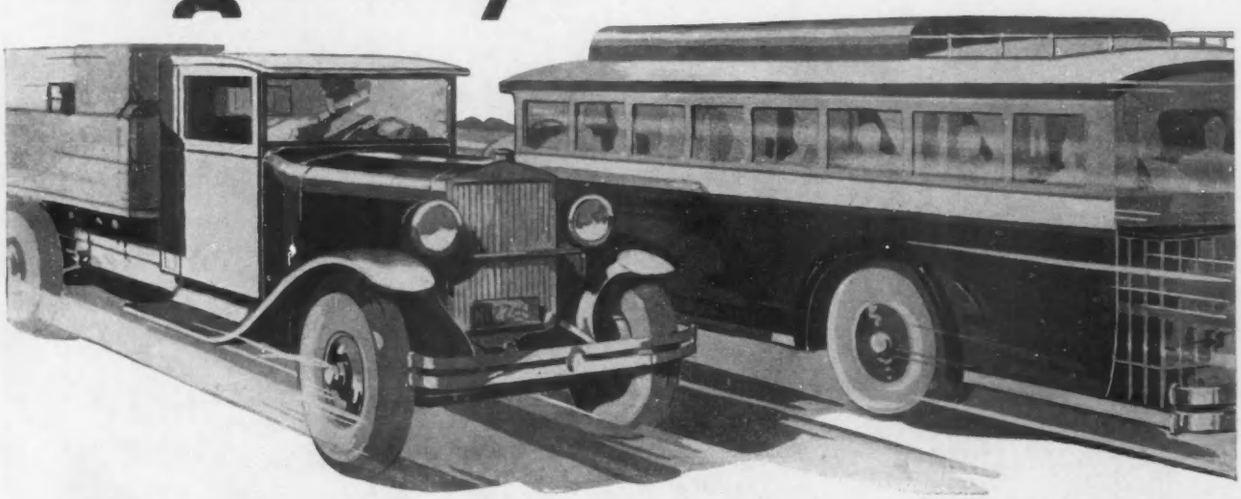
Newark Detroit Chicago Pittsburgh Oakland

HYATT

QUIET ROLLER BEARINGS

PROTECTING QUALITY PRODUCTS

for greater safety on the highways



Trucks and buses maintain faster schedules with greater safety—earn more transportation dollars per day—because of the ever-increasing use of Bendix Brakes.

BENDIX BRAKE COMPANY
SOUTH BEND, INDIANA
(Division of Bendix Aviation Corporation)

BENDIX 4 BRAKES

COMMERCIAL CAR JOURNAL
and OPERATION & MAINTENANCE

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They Do a Good Turn on Every Close-Corner Job

No job is hard to get at—with these Duohex - Box "Superrenches." Long reach—abrupt offset—thin head-walls. Every detail provides working ease where space is limited. Twelve-point openings never slip—never round the corners of a nut.

The Double Offset pattern—with a different size opening in each head—turns nuts completely with a swing of 30°. The Single Offset Pattern with the same opening in both heads—works readily in an arc as small as 15°.

And like all "Superrenches," they're forged from Chrome-Molybdenum steel, heat-treated and Chrome-plated over nickel; finished bright. Furnished Singly or in Sets.

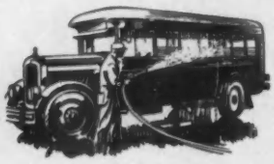
4 Sets for awkward jobs. Packed in strong metal cases.

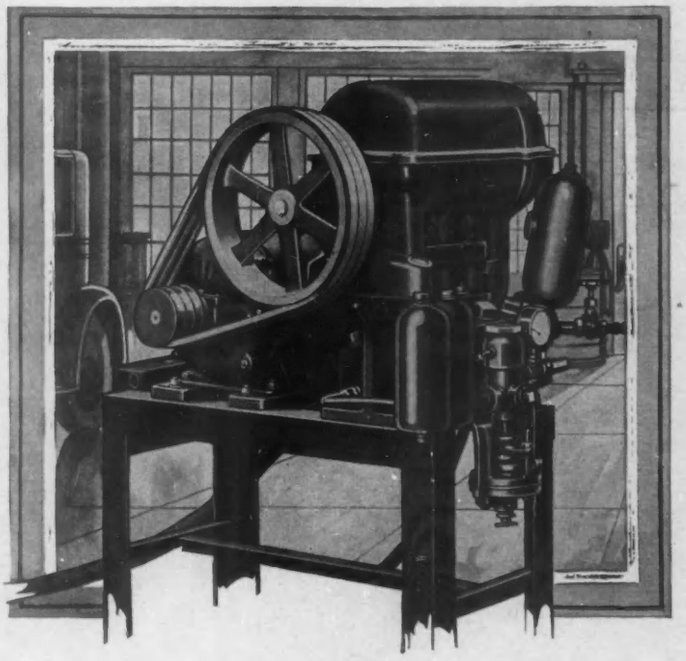
Every "Superrench" is Guaranteed Against Breakage

WILLIAMS
SUPERIOR DROP-FORGED TOOLS
"SUPERRENCH"
(Chrome-Molybdenum)
DUOHEX-BOX PATTERNS

J. H. WILLIAMS & CO., *"The Wrench People"*
New York BUFFALO Chicago

Promoting bus safety—with a Curtis Washer





Curtis Silent Enclosed Slow Speed Pump—especially designed and built by Curtis for car washing, not an adapted "Tree sprayer", nor undependable industrial pump:

Self-oiling:—no oil or grease cups to require daily attention, high and low level oil filling gauge provided.

• • •

Triplex type (three cylinders)—provides constant and steady pressure, no pulsation as with duplex (two cylinder) pumps.

• • •

Outside Packed Pistons—with non-binding ball and socket glands; packing adjustable without removing a single part.

• • •

No cup leathers or crimps on piston. Cups wear and require constant replacement.

• • •

No porcelain lined cylinders which in time check and flake off, damaging leather cups.

• • •

Four bearing crankshaft—turned from solid bar of steel, two center bearings 3⅝" diameter; connecting rod bearings white metal with laminated shims for takeup.

• • •

Bronze valves and valve seats. Easily cleaned, inspectable and renewable.

• • •

Silent "V" Belt Drive—no sprockets nor gears to wear or break; frame all-metal construction, no wood to rot.

• • •

Pump Cannot Become Air Bound—can be connected direct to water supply line without danger of setting up "water hammer" or of blowing out plumbing fixtures.

• • •

Self-Closing Nozzle—has handy spring lever control; can be locked in either body or chassis wash position. Nozzle disc of hardened rustless steel, not quick wearing soft steel as in other makes.

PROGRESSIVE bus executives know that safety, even more than appearance, is one of the very important reasons for regular cleaning of buses . . . every part so thoroughly cleaned that no mechanical defect can escape the inspector.

In the Curtis Car Washer are facilities for just such thorough cleaning, plus a mechanical dependability backed up by Curtis' 76 years of machine design and manufacture.

Curtis designed the first power car washer and now furnishes the highest development of that washer, both in hydraulic and compressed air types. Making both, Curtis can recommend without bias the one best suited to a particular condition...the Air Washer for complete cleaning service and operation of other time and labor saving air devices, or the Hydraulic Washer where these additional compressed air facilities are already available or not needed.

CURTIS

CURTIS
Pneumatic Machinery Company
St. Louis

Curtis Pneumatic Mchy. Co.,
1929 Kienlen Ave., St. Louis—518-H Hudson Term., N. Y.
Please send catalog and information about [State product you are interested in]

*Name*_____

*Address*_____

B3

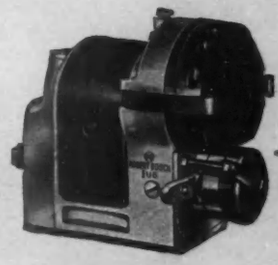
6 years old . . .
. . . and still on the job!

ALMOST every day we receive fresh evidence that "famous fleets depend on the Robert Bosch Super-Energy Magneto." Thus a letter comes in from the Interurban Transit Lines, Inc. This company operates The Short Way Lines out of Toledo, Ohio. There are 27 coaches in the fleet. 23 of them are equipped with Robert Bosch Super-Energy Magnetos.

"Robert Bosch Magnetos give much better service," testifies Mr. D. M. Temple, Assistant General Manager, "than any other make we know of. Those turned out six years ago are still in service although they had to be reconditioned, as the best life that anyone can hope for on a magneto without overhaul is 75,000 miles!"

75,000 miles without reconditioning! That is dependability — whether you measure dependability in terms of keeping up schedules or keeping down costs. That is dependability — whether you require it on an interurban bus line — on a globe-girdling airship like the Graf Zeppelin — or on a 100 passenger airplane like the Dornier Do-X (to name a few other important users of Robert Bosch Magnetos).

If you would make a test on even one bus, we know your name, too, would be added to the long list of famous fleets that depend on the Robert Bosch Super-Energy Magneto. To enable you to make such a test without risk, we offer the Trial Purchase Plan. Ask your Robert Bosch service station about it — or write us direct for the details and the story of the modern magneto, contained in the 25-page booklet: "Lift the Hood."

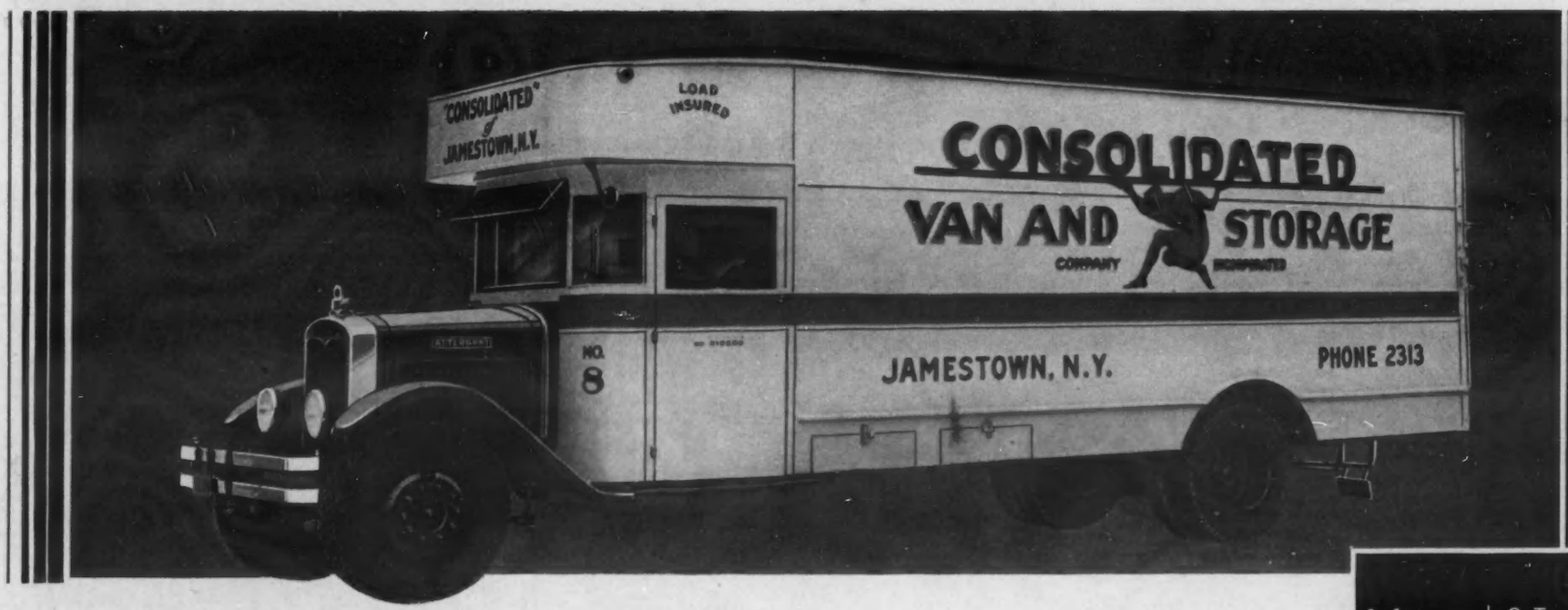


P. S. — Note the Robert Bosch Vibro-Balanced Horn mounted on the side of the coach illustrated above. "We use Robert Bosch Horns on our buses 100%," write The Short Way Lines. "We have some five and six years old that still give good results."

ROBERT BOSCH MAGNETO CO., Inc.
3603F Queens Blvd., Long Island City, N. Y.

All Robert Bosch Products bear the full name "ROBERT BOSCH" and this trademark of Robert Bosch A.-G.:

Famous Fleets Depend on the
Robert Bosch Super-Energy Magneto



IT'S NOT AN ACCIDENT

THAT OWNERS BECOME FRIENDS

and

ATTERBURY'S reputation for building very good trucks has not come by chance. For 27 years the men of Atterbury have specialized on building good trucks.

If we may judge the satisfaction of Atterbury owners by their repeat orders, it is safe to say that it pays to standardize on Quality.

Atterbury Quality Trucks are built in six 6 cylinder models to meet exacting demands for power, speed and safety. Payload capacities range from 1 to 4 tons. Wheelbases from 132 to 232 inches.

By honestly and sincerely trying to make each and every Atterbury a good Atterbury, we have succeeded in making friends as well as trucks.

ATTERBURY
MOTOR CAR COMPANY
ESTABLISHED 1903 BUFFALO, N. Y.
The oldest exclusive manufacturer of motor trucks

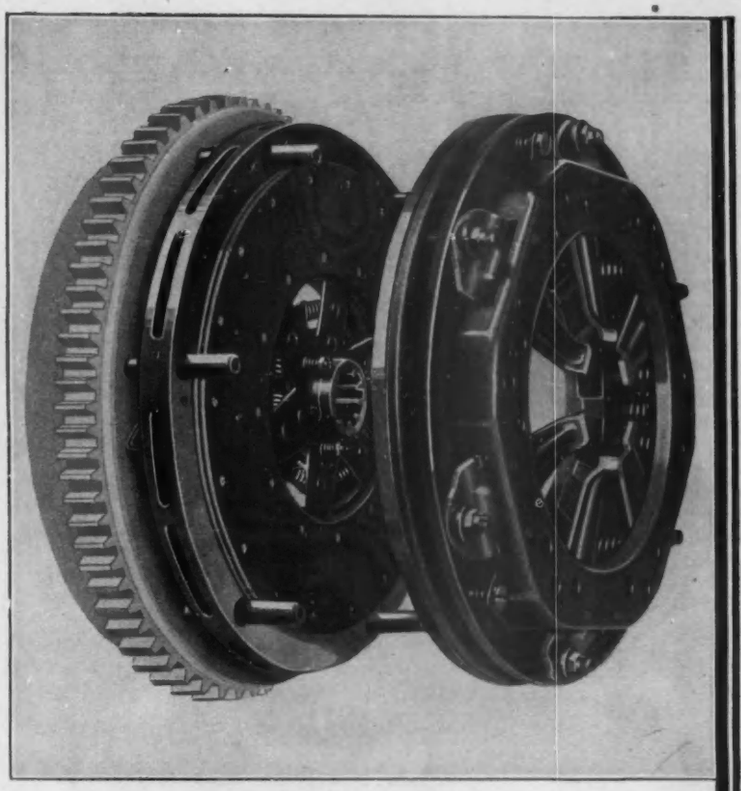
1, 1½ and 2 Ton SIXES

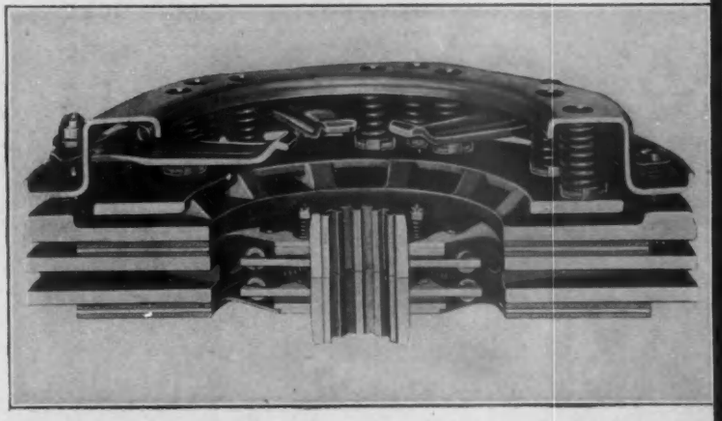
4 Wheel Hydraulic Brakes
4 Speed Transmissions
Pneumatic Tires
Timken Axles
Steel Wheels

2½, 3 and 4 Ton SIXES

Latest Type Transmissions
70, 80, 90 Horse Power
153 to 232 Wheelbases
Positive Brakes with Vacuum Boosters
Timken Axles

***you'll enjoy doing business with* ATTERBURY**





A NEW HEAVY DUTY DESIGN

FOR BUSES TRUCKS AND TRACTORS

LONG

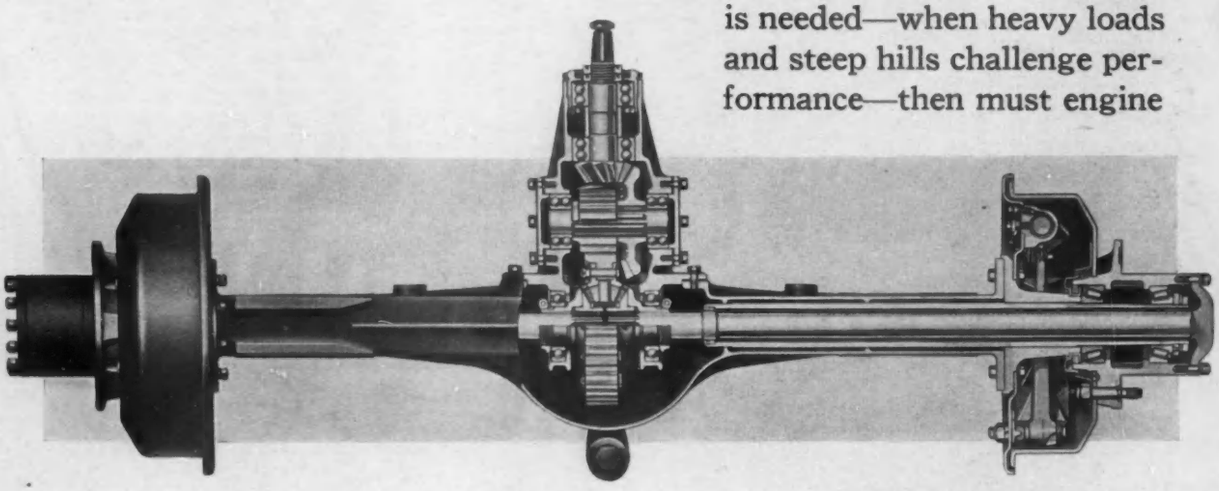
AUTOMOTIVE CLUTCHES

AUTOMOTIVE RADIATORS

LONG MANUFACTURING COMPANY
DETROIT, MICHIGAN

Better gearing for going

When the last ounce of power is needed—when heavy loads and steep hills challenge performance—then must engine



power be most effectively transmitted to the driving wheels.

That is the time when users of Wisconsin equipped trucks and buses most appreciate Wisconsin performance—the better going that results from better gearing.

WISCONSIN AXLE COMPANY
Oshkosh, Wisconsin

WISCONSIN AXLES

A PRACTICE *and a* POLICY

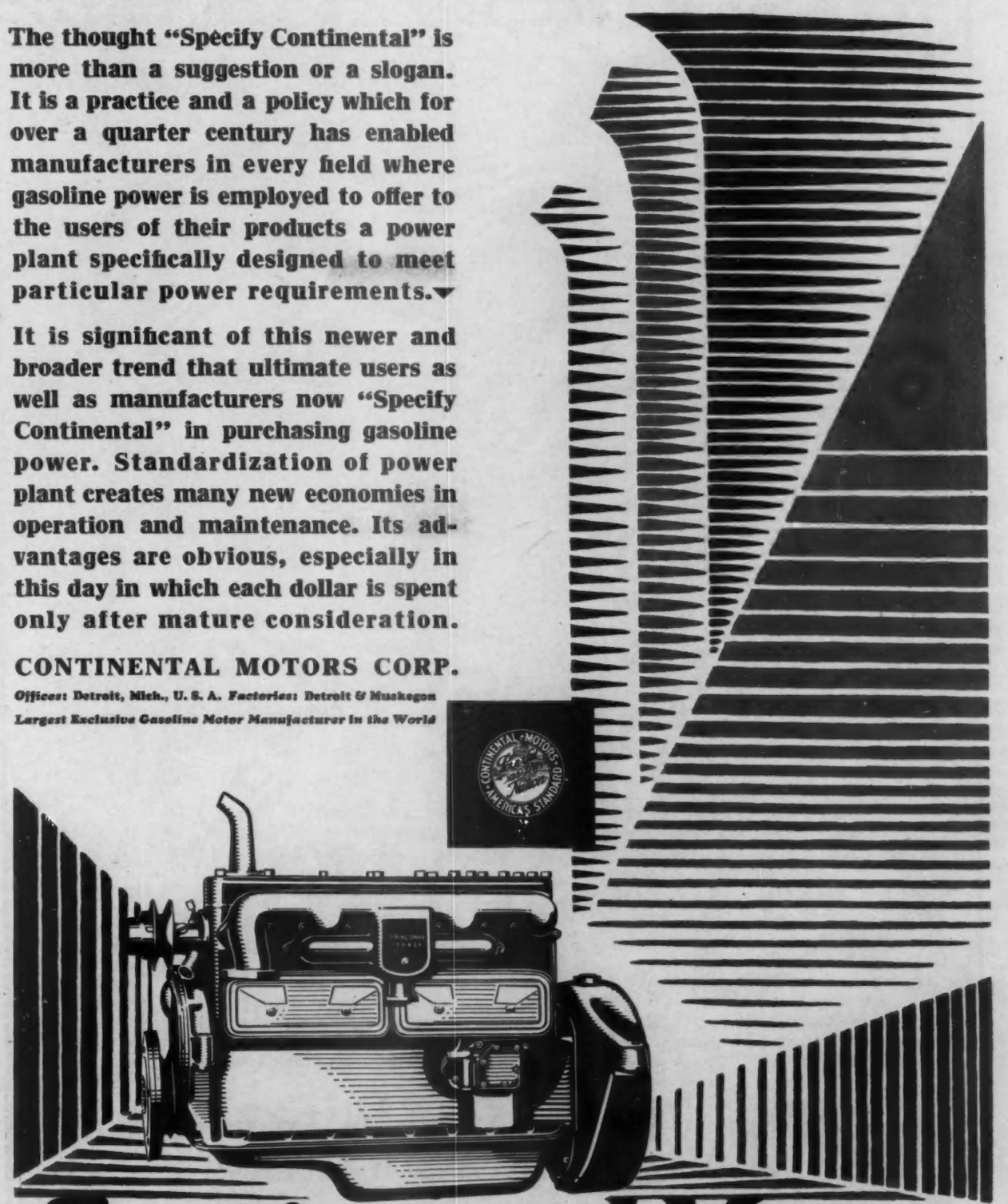
The thought "Specify Continental" is more than a suggestion or a slogan. It is a practice and a policy which for over a quarter century has enabled manufacturers in every field where gasoline power is employed to offer to the users of their products a power plant specifically designed to meet particular power requirements.

It is significant of this newer and broader trend that ultimate users as well as manufacturers now "Specify Continental" in purchasing gasoline power. Standardization of power plant creates many new economies in operation and maintenance. Its advantages are obvious, especially in this day in which each dollar is spent only after mature consideration.

CONTINENTAL MOTORS CORP.

***Offices:* Detroit, Mich., U. S. A. *Factories:* Detroit & Muskegon**

Largest Exclusive Gasoline Motor Manufacturer in the World



Continental Motors

Eleven Walter Snow Fighters of the Greyhound Lines cleared 4000 miles of highway during the blizzard which paralyzed the middle west last December

One of the WALTER SNOW FIGHTERS of the Greyhound Lines in action

This amazing performance was only possible due to the unique combination of Traction Power and Speed of the Walter Snow Fighter.

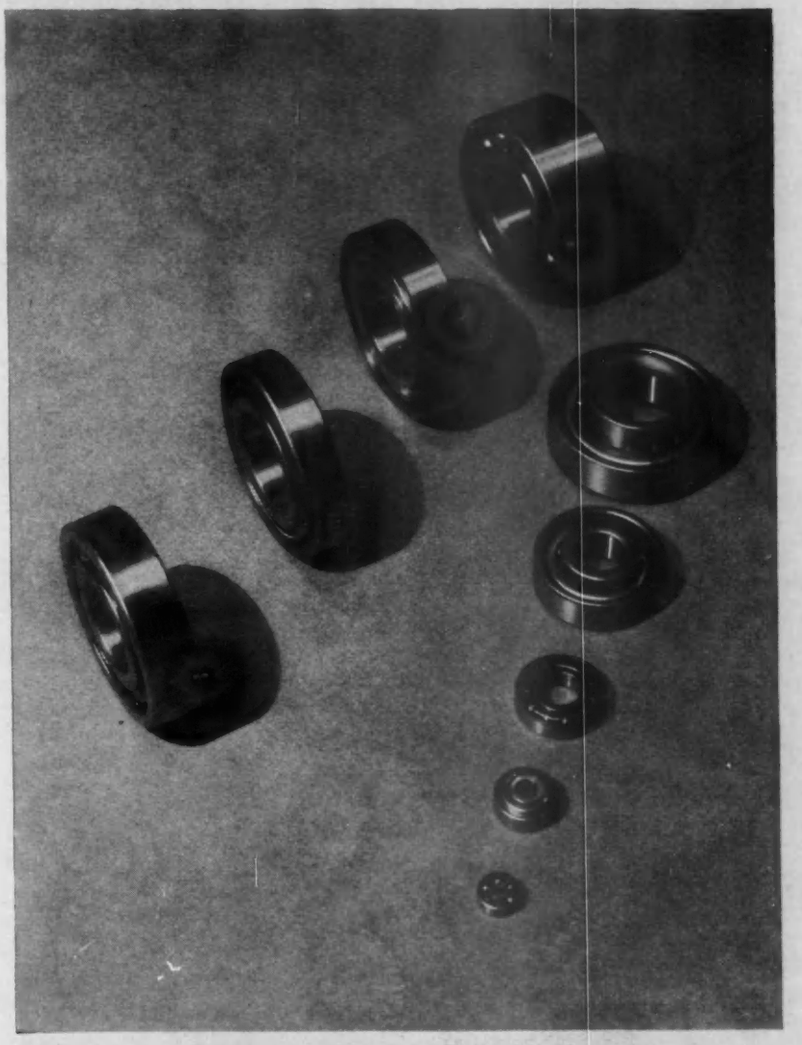
The Roads Opened Were as Follows:

Chicago to St. Louis via Springfield.
Chicago to St. Louis via Effingham.
Chicago to Indianapolis via Fowler.
Chicago to Indianapolis via Hammond and Cook, Ind.
St. Louis to Indianapolis.
Chicago to Detroit via Coldwater, Mich.
Chicago to Detroit via Kalamazoo.
Chicago to Flint.
Chicago to Muskegon.
South Bend to Fort Wayne.
Chicago to Lima, Ohio.
Indianapolis to Detroit.
Benton Harbor to Kalamazoo.

This mileage is greater than the distance from New York to San Francisco. In spite of the heavy fall of snow and the fact that many of the Greyhound routes are located close to the northern border of the country in the worst part of the snow belt the greatest length of time any route was tied up was 36 hours. Seventy-five men were used on the eleven Walter Snow Fighters as they operated day and night without stopping.

There is no substitute for the Traction, Power and Speed of WALTER SNOW FIGHTERS!

WALTER MOTOR TRUCK COMPANY, Inc.
Queens Blvd. at 37th Street
LONG ISLAND CITY, NEW YORK, N. Y.



NEW DEPARTURE BALL BEARINGS

In trucks and busses friction fathers wear. Wear necessitates adjustment. Proof that New Departure Ball Bearings reduce friction and wear to negligible factors is their complete freedom from need of adjustment, even after years of grueling service. Manufactured to standards inconceivably fine, New Departure Ball Bearings, throughout their long life, prove . . . in power saved . . . adjustments eliminated . . . and replacements avoided . . . that

NOTHING ROLLS LIKE A BALL

THE NEW DEPARTURE MANUFACTURING COMPANY, BRISTOL, CONNECTICUT

Here is the new 3-ton 6-cylinder International Speed Truck—Model A-5—now on view at all of the 159 Company-owned International Branches in the United States.

Sponsored by twenty-six years of automotive achievement, this latest member of the International line of trucks is definitely designed to provide the widest range of modern hauling service ever embodied in one truck.

The chassis itself, ready alike for high-speed transport and for the severe punishment of dump truck service, is being hailed as an outstanding advancement in automotive engineering. Be sure to read the specifications given at the left.

And Model A-5, as shown in the illustration, is as attractive in appearance as it is powerful in performance. Trim in silhouette and so obviously in tune with the times, it is a truck of which any owner may be proud.

Favor the new 3-ton International Speed Truck with an exacting examination at the nearest International Branch, then ask for a demonstration of its prowess on your own job. Doing so will not place you under the slightest obligation.

Brief Specifications of Model A-5

Wheelbase: 156, 170, 190 or 210 in.

Engine: International design and manufacture; 6-cylinder, valve-in-head, 7-bearing crankshaft, 7-bearing camshaft, removable cylinders; 3-point mounting with rubber-cushioned rear supports; pressure lubrication.

Clutch: Single plate, with built-in vibration damper.

Transmission: 5 speeds forward, 1 reverse, direct in high; one control lever.

Final Drive: Spiral bevel gear type.

Frame: Pressed-steel channel type, with deep middle section.

Springs: Semi-elliptic, front and rear. Auxiliary springs, quarter-elliptic.

Tires: 34 x 7 front, 34 x 7 dual rear, pneumatic, mounted on all-steel spoke-type wheels.

Brakes: Service, 4-wheel mechanical, internal expanding. Emergency, internal expanding on rear.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA
(INCORPORATED)
606 S. Michigan Ave. Chicago, Illinois

INTERNATIONAL TRUCKS

VOL. XXXIX PHILADELPHIA, MARCH, 1930 NUMBER 1

COMMERCIAL CAR JOURNAL AND OPERATION & MAINTENANCE

ALREADY ESTABLISHED AS AN INDISPENSABLE FACTOR IN MODERN DISTRIBUTION, THE MOTOR TRUCK ADVANCES TO SERVE IN YET ANOTHER GREAT ROLE—AS INDUSTRY'S AND SOCIETY'S PROTECTOR AGAINST CRIME'S COSTLY DEPREDATIONS. ARMORED TRUCKS HAVE PROVED THEIR EFFECTIVENESS AND CAN GO A LONG WAY TOWARD CURBING THE NATION'S 12-BILLION-DOLLAR CRIME INDUSTRY WITH ITS ACCOMPANYING LARGE TOLL OF HUMAN LIVES.

HOW TRUCK DEALERS AND SALESMEN CAN HELP MANUFACTURERS, BANKERS, PAYMASTERS, EXPRESS COMPANIES AND MINE OPERATORS TO VISUALIZE THE VALUE OF ARMORED SERVICE AND TO ADVISE INTELLIGENTLY ON THE SUBJECT IS TOLD IN AN ARTICLE ON THE NEXT PAGE.

TRUCK SALESMEN CAN DO CRIME PREVENTION

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19643

ENGINEERING

Helping Society to Hold Up the Holdup Men is a Function Every Salesman Can Fill

IT used to be a quite generally accepted statement that the automobile industry in the United States was our biggest business and we used to call attention to the fact that there are more automobiles in the United States than there are telephones; in fact it seemed quite easy to prove the supremacy of automobiles as the leader in American business.

Nevertheless, facts, however distasteful or seemingly unbelievable, insist on being facts, and the automobile industry is not our largest industry. The outstanding largest industry in America is organized crime—a statement readily proven if statistics are digested. During the past four years crime in America has cost upwards of twelve billions average per year. The World War taught us how to think in terms of billions. But just consider that the cost of the World War to all nations involved is picayune as compared to our twelve billions annual tribute to crime.

Of this amount about three billions is the value of the loot. If capitalized on the usual five per cent basis this revenue would give us a sixty-billion-dollar corporation — an unheard-of thing, too big to even think about. Of the balance there are approximately nine billions annually spent in the unsuccessful, and thoroughly disorganized, effort to thwart the public enemy, this amount including cost of policing, courts, prisons, loss of production due to misapplied man-power and kindred expenses.

Crime prevention has always seemed to our civic groups and legislatures to call for stringent laws calculated to insure punishment after the crime is committed. That is not crime prevention at all, as the rapidly growing crime movement proves.

The crook never tackles a protected job. Protection costs something, however, and the business public prefers to let an insurance policy substitute for preventing the crime. The crook makes a meticulous study of every detail, leaves nothing to chance, spells out every atom of opposition, or possible interference with his plan, uses uncanny judgment, and in 95 cases out of a hundred the attempted holdup is successful. The five per cent, in my own humble opinion, are failures by operators outside the fold of organized crime. The false notion persists in the public mind that Chicago is on top of the list as the most murderous city in the United States. Statistics compiled with great care show a crime-rating order as follows:

1 Memphis, Tenn.
2 Nashville, Tenn.
3 New Orleans, La.
4 Louisville, Ky.
5 St. Louis, Mo.
6 San Francisco, Cal.

Uses for Armored Trucks

Banks City and country, where it is the practice to collect deposits and deliver payrolls and other cash funds.

Mines For the paymaster delivering payrolls for large groups of men scattered over the mining district.

Construction Gangs For use by railroads, mines, public utilities, building contractors, etc., for payrolls.

Armored Service For organizations formed for the purpose of transporting money and valuables, such as are usually kept in safe deposit vaults.

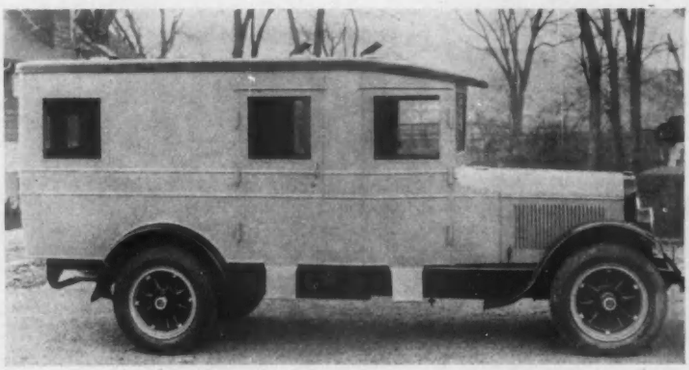
Express Companies For the transportation of valuable shipments such as silk, fur, cigarettes, etc.

Salesmen For the protection of valuable samples carried by salesmen in the glove, hosiery, jewelry, etc., business.

By JOHN J. DE BOVES

CRIME PREVENTION ENGINEER, AMERICAN ARMOR CORP.

ARMORED TRUCKS DRESSED UP LIKE A FORT ATTRACT ATTENTION. GREATER CRIME PROTECTION IS AFFORDED BY INNOCENT - LOOKING TRUCKS, INVISIBLY ARMORED



7 Cincinnati, Ohio
8 Los Angeles, Cal.
9 Spokane, Wash.
10 Indianapolis, Ind.
11 Seattle, Wash.
12 CHICAGO, ILL.
13 Dayton, Ohio
14 Washington, D. C.
15 Cleveland, Ohio
16 Pittsburgh, Pa.
17 Baltimore, Md.
18 Minneapolis, Minn.
19 NEW YORK, N. Y.
20 Buffalo, N. Y.
21 PHILADELPHIA, PA.
22 Boston, Mass.
23 Providence, R. I.
24 Newark, N. J.
25 Hartford, Conn.
26 Milwaukee, Wis.
27 Rochester, N. Y.
28 Reading, Pa.

The answer to the reputation given Chicago by newspaper statement and innuendo is that each murder committed in that great city is thoroughly publicised while lesser towns with over eight times the percentage of murders per unit of population do not get similar publicity.

TRUCK SALESMEN CAN DO CRIME PREVENTION ENGINEERING

This is intended as a short treatise on crime prevention engineering as applied to motor truck haulage of valuable loads, but it is essential that we look into some of the facts we propose to deal with before we undertake to apply protective measures. Therefore let's look into where the gunman comes from, what his inclinations are, and why, aside from too stringent laws, he is so desperately murderous now, and will kill rather than risk identification.

Firstly, there are in the United States today, according to dependable statistics compiled with assiduous care by insurance company statisticians, some 160,000 murderers. This compares with about 90,000 policemen, 12,000 lawyers and 120,000 school teachers. Much has been said about home life, education, moral training and example by parents being the ideal method of keeping growing boys and girls out of the crime army. Let's see what chance they have with society at large side stepping its responsibility and casually ducking the facts available for consideration.

Boys and girls, of school and high-school age become drug addicts—*HOW?* Is there any possible doubt that these boys and girls are fed with dope by a recruiting agent, paid to entice them into an incurable vice—the heroin habit? Else why heroin instead of cocaine, morphine, opium, or other drugs for which there are known cures. The heroin habit is incurable. Do children walk boldly into the most painful death there is, and into a greatly abbreviated life of torture while it lasts? Probably not—there is a guide who starts them on this path, and having surreptitiously, at first, and openly later on, fed a fast-growing appetite, calmly refers the new addict to the man higher up, refers him to the "fence."

And it is easy to analyze the operation from then on. I can hear the fence saying: "This stuff costs money—real money. Where do you think you're going to get the price if you continue to use this the way you do now?"

But the youth is in agony and pleads for a "shot." The effect of heroin, as its name implies, is to create a heroic mentality, and feeling of great physical vigor. The reverse, and worse, is in evidence when the shot wears off. The worst of it is that with the craving for another shot comes a steady expansion and contraction of the bones of the body — pain equivalent to a toothace multiplied by the volume of the bony structure of the body as compared with a single tooth. And most of us know the agony of a real toothache. This boy, or girl, in this condition, is a candidate for any job his master decides to put first. He is made to study the methods used, is given a careful schooling in the art, has it made clear to him that disobedience, carelessness, for-

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LOAD SPACE UNIFORMITY URGED FOR INDUSTRY

Eight Loading Lengths and One Frame Width Would Help Owners, Body Builders and Truck Makers

By PIERRE SCHON
SALES ENGINEER, GENERAL MOTORS TRUCK CO.

FOR many years, manufacturers and operators of motor trucks have felt the need of standardization in sizes, wheelbases and body load spaces. As far back as 1920, the Society of Automotive Engineers took action on this matter and appointed a committee to investigate the possibilities of setting up recommended standard dimensions for motor truck bodies, but no agreement was reached. Since 1921 no serious effort has been made by any organization to arrive at a closer standardization in any one of the important fundamental dimensions of motor trucks. Frankly, the motor truck industry has been floundering in so far as uniform dimensions of the product are concerned.

Body manufacturers throughout the country are anxious to secure a greater standardization of the most important dimension involved: namely, the distance from the cab to the center line of the rear axle. If this dimension could be standardized among the various makes, the business of the body builders would be greatly increased, as certain size bodies that would be applicable to any make of truck could be built up for stock in large quantities. At the present time this is impossible, as no one truck

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Editor's Note—This article is an excerpt from the paper of Mr. Schon, delivered at the annual meeting of the Society of Automotive Engineers at Detroit in January.

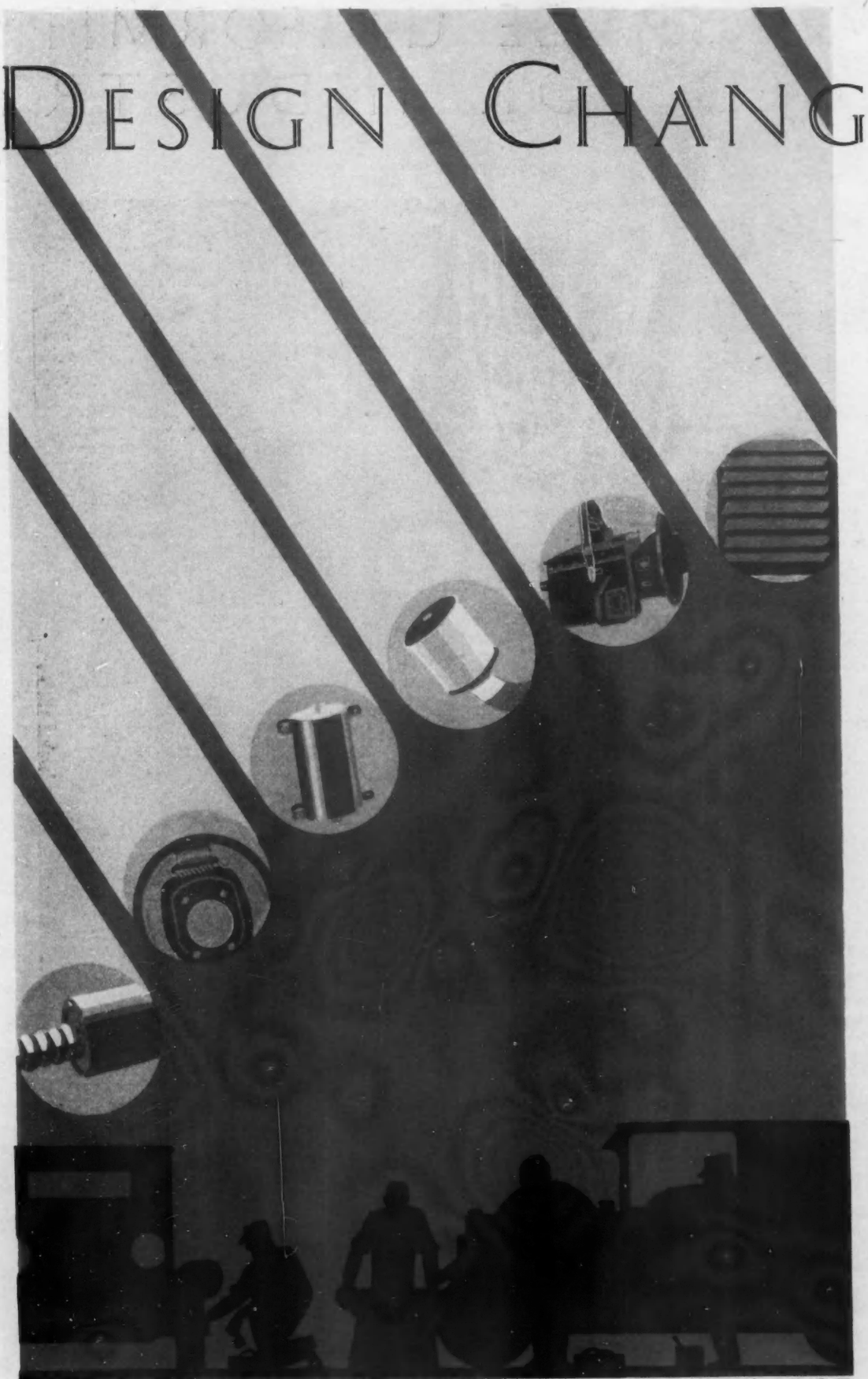
Suggested Standard Load Spaces and Body Lengths

Load Space	Extra Short	Short Body	Standard Length	Maximum Length
39 in.	5 ft.	5½ ft.	6 ft.	6½ ft.
48 in.	6½ ft.	7 ft.	7½ ft.	8 ft.
59 in.	8 ft.	8½ ft.	9 ft.	9½ ft.
70 in.	9½ ft.	10 ft.	10½ ft.	11 ft.
82 in.	11 ft.	11½ ft.	12 ft.	13 ft.
99 in.	13 ft.	14 ft.	15 ft.	16 ft.
115 in.	16 ft.	17 ft.	18 ft.	19 ft.
135 in.	19 ft.	20 ft.	21 ft.	22 ft.

Load space is measured from back of cab to center line of rear axle.

Proposed Axle Weight Regulations for Trucks With Pneumatic Tires

Class of Highway	Weight Per Axle 8 ft. Spacing	Weight Per Axle Less Than 8 ft.	Weight Per In. Width of Tire
A	22,500 lb.	17,000 lb.	700 lb.
B	19,000 lb.	14,000 lb.	625 lb.
C	15,500 lb.	11,000 lb.	550 lb.
D	12,000 lb.	8,000 lb.	475 lb.



MAKE MONEY FROM MAINTENANCE

CHANGE SERVICE

Dealers Can Make Shops Profitable by Adapting Repair Facilities to Many New Requirements of Modern Trucks

TRUCKS have changed much in the last few years, and truck users know it.

And along with trucks, maintenance has changed and users should know it. But how many dealers are telling them and selling them the new kinds of service that the new types of trucks have brought with them?

There is a lot to tell and to sell. Improvements in truck design during the last three years were more numerous and revolutionary than the combined changes made during the 15 preceding years, according to one truck authority. Operation too has been transformed. Long, high-speed trips are common, heavy-duty trucks travel at passenger-car speeds, starting and stopping ability of large and small trucks equals demands of city traffic. As a result many maintenance ideas and methods have gone to the junk yard and new problems have arisen.

By no means the least of the changes in maintenance is the present trend toward relatively less major work and relatively more minor repairs and adjustments. A modern motor truck not only incorporates a lot of features, and devices which its predecessors lacked but it runs farther between overhauls and periodic repairs.

What are the developments in truck engineering which have affected maintenance? Let us compare a typical truck of 1925 with a 1930 model to find an answer. In 1925 the four-cylinder engine had no rival, solid tires were common, four-wheel brakes were scarce, and three-speed transmissions were popular up to 2-ton capacity. A lubrication job entailed much rotating of reluctant grease cups, and service brakes could be adjusted by thumb nuts, in many cases. Electric starters were optional at extra cost on many one-tonners.

Present-day trucks incorporate so many improvements over 1925 that it is not easy to compile a list of jobs which have been modified by changes and of new jobs which have been added because of such changes. These jobs cannot be counted on the fingers of one hand, or both hands. As a matter of fact it is necessary to refer to a list of repair operations, such as a flat rate price list, to obtain a list of operations which even approaches completeness. The accompanying list, incomplete as it is, shows the variety of repair jobs affected.

Front axle operations are the first group in the flat rate price lists which have been published in COMMERCIAL CAR JOURNAL AND OPERATION & MAINTENANCE. Putting brakes on front wheels changed the design of the whole front end. Coupled with this development was the adoption of pneumatic tires, followed now by balloons. Camber, castor and toe-in are no mere academic terms to service men these days. These factors of front-end alignment must be measured with hair-splitting accuracy and equipment must be at hand for making minute adjustments and changes in parts in front-end assemblies.

Brakes, third of the flat rate operation groups, have undergone

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Operations which resulted from, or were modified by, recent changes in truck design:

Front Axle
Check only, camber, castor and toe-in.

Brakes and Linkage
Service brakes, adjust complete, four-wheel type.
Reline four-wheel service brakes.
Service brakes, free up and adjust complete, four-wheel type.
Hydraulic system, bleed only.
Master cylinder, hone and renew cups.
Wheel cylinder one, hone and renew cups.
One wheel cylinder casting and cups, renew.
Overhaul service brake operating system.

Radiator
Shutter assembly, remove and replace.

Cooling
Remove and replace thermostat.

Fuel System
Air cleaner, remove, clean and replace.
Carburetor, dual type, remove, disassemble, reassemble and clean.

Engine
Tune engine; includes clean and adjust breaker points and spark plugs, clean fuel supply and carburetor screens, retime and synchronize ignition, adjust carburetor and fan belt.
Oil filter, renew cartridge.
Rod bearings, adjust all.
Renew all rod bearings.
Main bearings only, renew all.
Grind valves, clean carbon, tune engine; includes refacing valves and seats, clean and adjust breaker points and spark plugs, clean fuel supply and carburetor screens, adjust tappets and fan belt and retime ignition.

Pins and Rings
All major operations are affected by number of cylinders.

Piston Assemblies
Operation prices are affected by number of cylinders and type of piston and type of connecting rod bearings.

Valves, Tappets, Rockers
Number of cylinders changes prices for major operations.
Adjust tappets.

Flywheel
Flywheel ring gear, renew.

Transmission
Auxiliary transmissions, same operations as main transmissions.

Rear Axle
Dual rear tires change axle and wheel removal jobs.
Tandem rear axles alter several operations.

Springs
Auxiliary rear spring, remove and replace.

Ignition
Breaker points renew, includes synchronizing and retiming.
Points, reface, synchronize, retime and clean spark plugs.
Charging rate, adjust.
Generator brushes, renew.
Starter brushes, renew.
Generator, remove and replace.
Starter, remove and replace.
Bendix spring, renew.
Starter switch, remove and replace or renew.

Body
Body bolts, tighten all.
Door glass, renew.
Renew all bumpers, one door.
Door striker plate, renew one.
Hood lacing, renew all.

DUALS CAN REDUCE

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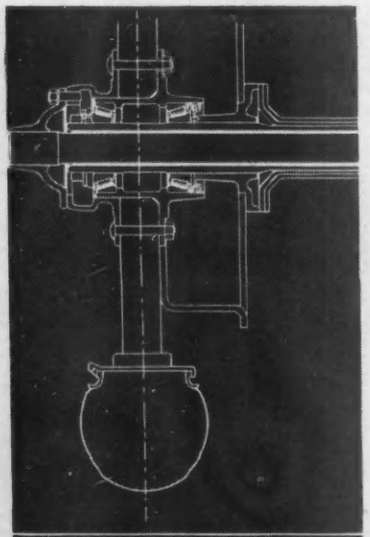

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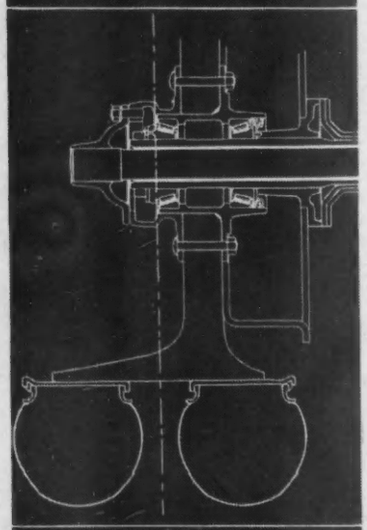

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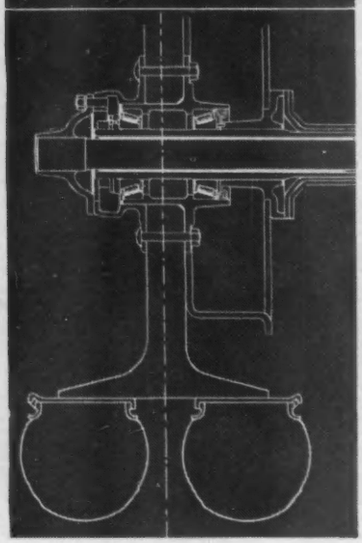

CARRYING CAPACITY OF A FULL-FLOATING AXLE MAY BE REDUCED BY IMPROPER TIRE MOUNTING. FIG. 1—A SINGLE TIRE PROPERLY MOUNTED ON A FULL-FLOATING AXLE BRINGS LOAD LINE OF TIRE BETWEEN WHEEL BEARINGS. FIG. 2—IMPROPERLY MOUNTED DUAL PNEUMATICS BRING LOAD LINE OF TIRE OUTSIDE WHEEL BEARINGS. THIS CONDITION INCREASES LOAD ON BEARINGS AND HOUSINGS, THUS REDUCES CARRYING CAPACITY OF AXLE. FIG. 3—PROPER MOUNTING OF DUAL TIRES BRINGS LOAD LINE BETWEEN BEARINGS, AS IN FIG. 1

CARRYING CAPACITY OF FRONT WHEELS MAY BE REDUCED BY IMPROPER MOUNTING OF TIRES. CORRECT POSITION, IN FIG. 7, BRINGS LOAD LINE OF TIRE NEAR INNER BEARING AND A SHORT DISTANCE FROM CENTER LINE OF KNUCKLE PIN. A WHEEL WITH

TRUCK owners and dealers generally look upon dual pneumatic rear tires as a means of carrying a larger load on a given truck. Although dual tires selected may have ample carrying capacity for the job it does not necessarily follow that a greater load can be carried safely. On the contrary, if the application of dual tires is made without regard to load distribution it may actually reduce carrying capacity of a rear axle, instead of bringing about an increase. In any case, adding tires does not add one pound to the ability of an axle to carry a load.

When dual tires are used in place of single tires it frequently is necessary to offset the dual combination to avoid interference with springs or frame or other chassis parts. As a result the load on axle housing or axle shaft is shifted and additional stress is set up in housing and shaft. This condition is clearly shown in the accompanying illustrations, furnished by courtesy of the Timken Detroit Axle Co., Detroit, Mich.

A single pneumatic tire is shown on a full-floating axle in Fig. 1. Load on the tire comes just between the two wheel bearings, as intended in the design. If dual tires are desired and chassis construction prevents the inner tire from extending beyond the edge of the brake drum an application like Fig. 2 may be made. The dual tires are

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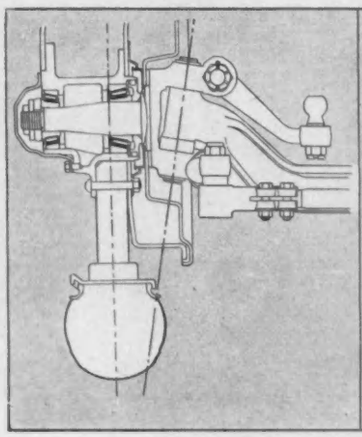

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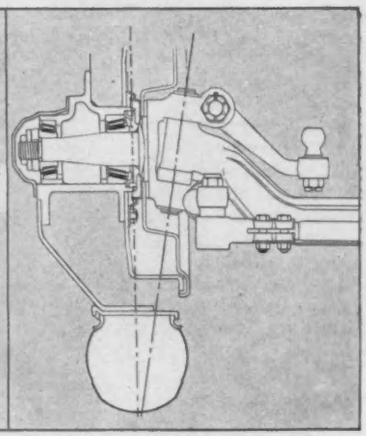


AXLE CAPACITY

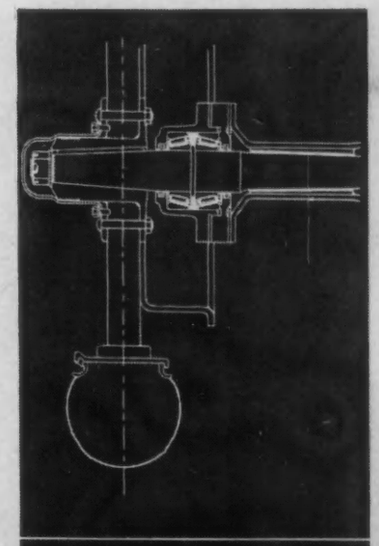
outward from correct position and the center of the tires is now outside the outer wheel bearing. This brings a load on this bearing which may be several times that intended and it also increases stress on the housing.

Correct mounting of dual tires on an axle of this type is shown in Fig. 3. Load of tires comes between wheel bearings, as with single tires, shown in Fig. 1.

Similar conditions are brought about when dual pneumatic tires are incorrectly applied to semi-floating axles. It is desirable that center of the tire be as close as possible to the axle shaft bearings. Improper dual mounting moves the tire load line almost to the end of the axle shaft, and breakage results.

While there is not as much load to carry on front wheels as on rear wheels the question of load distribution on front wheels cannot be overlooked. To make front wheels and rear wheels interchangeable it is customary to use a front wheel with the same offset as that on the rear axle.

Too much offset in the wheel moves the load either in or out. In addition to imposing stresses on wheel bearings this condition interferes with steering. Moving the load line of tires away from end of spindle may double stress on the spindle and therefore reduce carrying capacity of front axle.



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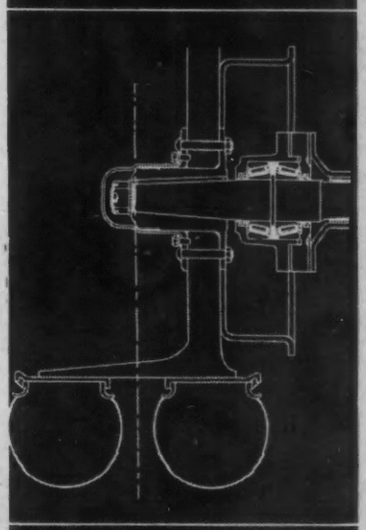

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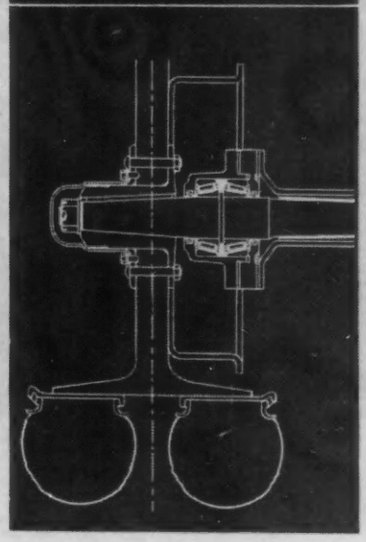
TOO MUCH OFFSET, FIG. 8, BRINGS TOO MUCH LOAD ON THE INNER BEARING AND DECREASES TURNING RADIUS. A CHANGE OF HUB, AS IN FIG. 9, RESTORES TIRE LOAD LINE TO ITS PROPER POSITION. A WHEEL WITH TOO LITTLE OFFSET, FIG. 10, MOUNTED ON THE SAME HUB AS FIG. 9, PLACES LOAD LINE OF TIRE TOO FAR AWAY FROM CENTER LINE OF KNUCKLE. THIS PUTS A LOT OF STRESS ON THE SPINDLE AND MAKES THE VEHICLE HARDER TO STEER

IMPROPERLY MOUNTED DUAL TIRES REDUCE CARRYING CAPACITY OF SEMI-FLOATING REAR AXLES. IN FIG. 4 LOAD LINE OF SINGLE TIRE IS NEAR SHAFT BEARINGS BUT IN FIG. 5 IT IS OUT AT END OF AXLE SHAFT. THIS CAUSES AXLE SHAFTS TO BREAK UNLESS LOAD IS REDUCED. DUAL TIRES PLACED AS IN FIG. 6 BRING THE LOAD LINE AS WITH SINGLE TIRES



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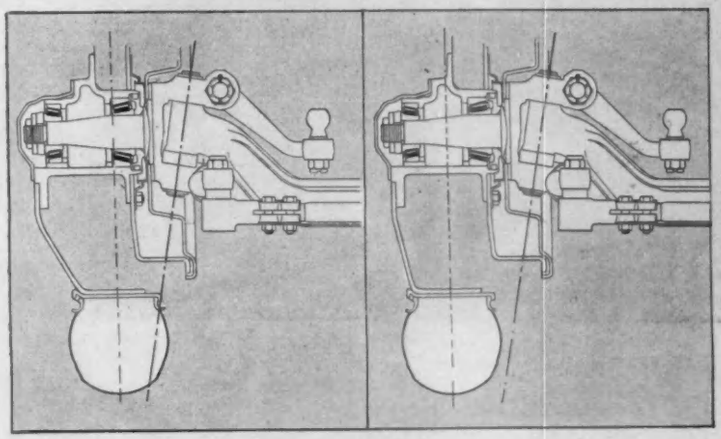

1929
Truck Registrations
Alabama 6,301 10,456 66 38,500 18.0
Arizona 1,574 3,061 94 12,583 16.0
Arkansas 3,167 7,911 150 39,223 7.0
California 17,439 30,735 76 229,033 16.0
Colorado 3,581 6,382 78 28,501 44.0
Connecticut 6,369 7,828 23 50,200 4.0
Delaware 984 1,444 47 9,775 —2.0
District Columbia 1,463 2,328 59 17,302 8.0
Florida 3,473 5,395 55 56,094 —.3
Georgia 3,770 6,768 80 48,166 20.0
Idaho 1,678 2,572 53 13,688 22.0
Illinois 17,731 26,462 49 204,175 7.0
Indiana 9,562 14,462 51 127,641 12.0
Iowa 8,597 11,445 33 68,402 12.0
Kansas 4,809 12,648 163 73,694 8.0
Kentucky 4,522 6,037 33 34,132 16.0
Louisiana 3,431 7,314 113 46,303 12.0
Maine 2,953 4,785 62 31,535 9.0
Maryland 4,682 7,055 50 8,703 10.0
Massachusetts 11,809 16,969 44 98,500 7.0
Michigan 16,638 25,585 54 176,824 12.0
Minnesota 7,395 11,282 52 99,696 —.4
Mississipp. 2,600 6,977 168 31,000 11.0
Missouri 9,882 16,047 62 84,756 14.0
Montana 4,102 4,338 6 25,092 47.0
Nebraska 5,315 8,144 53 41,286 20.0
Nevada 323 934 189 6,604 36.0
New Hampshire 1,576 2,491 58 19,025 5.0
New Jersey 13,842 17,587 27 133,774 12.0
New Mexico 1,300 2,157 66 2,750 4.0
New York 34,297 46,984 37 345,500 28.0
North Carolina 7,010 9,618 —3 56,535 19.0
North Dakota 4,267 4,144 43 25,954 .7
Ohio 19,068 27,338 56 200,000 4.0
Oklahoma 8,279 12,937 98 60,390 12.0
Oregon 2,941 5,819 48 24,656 9.0
Pennsylvania 25,185 37,258 54 241,442 .3
Rhode Island 1,918 2,953 62 20,489 13.0
South Carolina 2,932 4,760 17 25,591 12.0
South Dakota 3,555 4,160 62 22,780 15.0
Tennessee 3,618 5,851 68 32,300 19.0
Texas 19,886 33,381 94 182,438 22.0
Utah 1,346 2,610 37 17,500 13.0
Vermont 1,484 2,027 63 8,559 13.0
Virginia 6,055 9,898 88 61,093 5.0
Washington 4,423 8,325 90 62,421 11.0
West Virginia 3,536 5,299 51 38,618 9.0
Wisconsin 9,541 14,393 36 105,253 16.0
Wyoming 1,088 1,481 8,800
United States 341,297 526,835 54 3,397,276 9.87
(Table 1)
Fossler

TRUCK PRODUCTION
885,047 IN 1929!

Industry Flirts With the Million Mark as Hidden Facts Raise Department of Commerce's 805,047 Total

By GEORGE T. HOOK

IN 1929 the United States and Canada produced an estimated total of 885,047 trucks. (Just take a deep breath and proceed.)

If you have been sufficiently interested in truck production to keep tabs on the monthly statistics reported by the Department of Commerce, you will be possessed of contradictory evidence. In fact, you will know that the Department of Commerce figures show a truck production of 805,047. The discrepancy may induce in you a strong urge to shoot the writer for a cock-eyed statistician, but put up your gun for a moment while the cards are laid on the table and an ace is pulled from the sleeve. The ace has been concealed right along, and the strange thing is that heretofore no one apparently has noticed its absence from the deck.

What would you say if you knew that 805,047 trucks were produced in America in 1929, and that domestic sales and exports actually amounted to 887,466? In other words, that 82,419 more trucks were sold than were produced? If you were an optimist you would probably say that the difference represented inventory depreciation. But if you were a skeptic you'd say a very emphatic "boloney" to the stock depreciation idea and commence looking for the bugs. Your correspondent spake that very word and reached for the flit. And after a thorough spraying of statistical hangouts in Washington, New York, Detroit and Philadelphia he paralyzed a particularly vicious-looking bug which, upon being resuscitated, proved to be none other than the "missing link" of truck statistics. Briefly, it represented the following facts:

1. That Ford Model A passenger-car chassis equipped with commercial bodies have been reported to the Department of Commerce as passenger-car production. This is Statistical Discrepancy *A* because these vehicles were sold as trucks and found their way into truck registrations. (It should be noted here that Chevrolet practice has been contrary to that of Ford. In other words, passenger cars with commercial bodies have been reported as truck production.)

2. That Ford stripped passenger-car chassis sold domestically have been reported to the Department of Commerce as passenger-car production. This is Statistical Discrepancy *C* because obviously no one in America (with the probable exception of Amos 'n Andy's Fresh Air Taxicab Co., Incorpolated) buys a Ford passenger-car chassis for the purpose of mounting on it a passenger-car body. But Ford stripped passenger-car chassis are bought for the purpose of having mounted on them commercial bodies. Such vehicles are sold as trucks and find their way into truck registrations.

3. That stripped passenger-car chassis sold domestically by Chevrolet and other National Automobile Chamber of Commerce members interested in the truck field have been reported to the Department of Commerce as passenger - car production. This is Statistical Discrepancy *E* for the same reason as above.

These Statistical Discrepancies *A*, *C*, *E*—now out of the sleeve and on the table—represent an estimated total of 80,000 units which are registered as trucks but reported as passenger-car production. It is readily to be seen that this method of reporting is detrimental to the pasenger-car field because the 80,000 units become unsold passenger-car production and find their way into the passenger-car inventory column, which sags enough without this added burden. The unfairness to the truck field is equally obvious because first, the system deprives the truck industry of a 10 per cent production increase, and, second, because it creates an inventory depreciation total so huge as to be positively ridiculous and to shroud with discredit all trucks statistics.

The contention of the COMMERCIAL CAR JOURNAL AND OPERATION & MAINTENANCE is, therefore, that every passenger-car chassis produced which finds its way into truck registrations should be recorded as truck production. There is no other course if automotive statistics are to be any way near accurate. And it will be of interest to all in the truck industry to know that the soundness of the contention has been acknowledged by the sources of statistical data, and that an immediate

Analysis of 1929 Truck Sales and Production

Domestic truck sales (1)		545,274
Foreign truck sales (2)		343,407
Total truck sales		888,681
Dept. of Commerce truck production (3)	805,047	
N. A. C. C. sales of passenger-car chassis registered as commercial cars	15,000	
Ford sales of passenger-car chassis registered as commercial cars	65,000	
Total vehicles sold as trucks but not included in truck production	80,000	
Actual truck production		885,047
1929 truck inventory decrease		3,634

(1) New truck registrations of 526,834 plus 3½ per cent, generally accepted as the percentage of error.

(2) Includes exports, foreign assemblies and Canadian output.

(3) Result of subtracting N. A. C. C. bus production of 5,502 from Department of Commerce's combined truck and bus output.

TABLE 2

change in the method of reporting production has been promised, together with a revision of back figures.

The approbation of the Bureau of Census of the Department of Commerce is contained in this communication to the writer: "We greatly appreciate your discovering this error and ferreting out its cause, since this should result in a decided improvement in the quality of future automobile-production reports."

Taking into account the discrepancies before mentioned, the COMMERCIAL CAR JOURNAL AND OPERATION & MAINTENANCE has revised available truck statistics and arrived at conclusions which are presented in accompanying Table 2.

Accepting the 885,047 commercial vehicle production figure as actual, it becomes evident that the truck industry for the first time in history is within easy hailing distance of the million mark. At the moment it is not conceivable that the million mark will be reached this year. It will, indeed, be the occasion for extreme satisfaction if production, sales and export records for 1930 approximate those of 1929. A slight increase is, at best, the most that can be hoped for.

The truck production increase in 1929 over 1928 was tremendous—actually 53 per cent. The increase in domestic sales was 54 per cent and in foreign sales, 64 per cent.

At the end of 1929, there were 3,397,276 trucks registered in the United States, a gain over 1928 of 9.87 per cent.

The domestic sales situation during 1929, according to new truck registration figures, saw the light-truck category represented by Ford and Chevrolet sky-rocket to a new high position. Ford furnished the greater part of the propulsion in the form of 223,405 units, as compared with 65,260 back in 1928. Together Ford and Chevrolet were responsible for 73 per cent of the trucks sold in the United States. In 1928 they could claim only 58.3 per cent because Ford was learning that all is not merry between model changes.

It is apparent, therefore, that while Ford and Chevrolet were out making whoopee in 1929 the rest of the industry observed the eighteenth amendment and took a percentage-of-total socking but managed to better 1928 unit sales by a small amount. See Table 4 for the detailed statistics.

In 1929 there was a slight realignment of relative position among truck manufacturers. A glance at Table 3 will furnish the low-down.

And the reader who wants to know truck registration particulars will find highly interesting data incorporated in Table 1, which acts as a radiator shutter in the illustration on the previous page.

TRUCK PRODUCTION 885,047 IN 1929!

Truck Sales by Makes

Truck Make	1929 Position	1929 Total Sales	1928 Position	1928 Total Sales	1929 % Gain
Ford	1	223,405	2	65,260	242
Chevrolet	2	160,892	1	133,795	20
Int. Harv.	3	31,434	4	26,159	20
Dodge	4	28,567	3	36,570	—22
G.M.C.	5	14,248	5	17,560	—18
Reo	6	12,894	6	16,325	—21
Mack	7	6,823	7	6,890	—.9
White	8	6,121	8	6,260	—2
Brockway	9	4,533	9	3,645	24
Diamond T	10	3,590	12	2,308	55
Autocar	11	2,941	11	2,348	25
Federal	12	2,853	10	3,118	—8
Stewart	13	2,163	13	1,964	10
Sterling	14	1,577	14	1,041	51
All Others		24,793		18,108	36
Total		526,834		341,297	54

TABLE 3

	1929 Sales	% of Total	1928 Sales	% of Total
Ford-Chevrolet	384,297	72.9	199,055	58.3
All Others	142,537	27.1	142,242	41.7
Total	526,834	100.0	341,297	100.0

TABLE 4

DRY GOODS MEN SEEK LOWER DELIVERY COST

Truck Discussions Dominate National Retail Convention

CONVENIENCE of motor transportation is so important to many lines of business that trucks would be used even though they cost much more to operate than they do at present. But this fact does not deter leaders in any given line of business having need of flexible delivery service from seeking to keep the convenience and at the same time reduce its cost.

Sessions of the nineteenth annual convention of the National Retail Dry Goods Association held recently in New York indicated that leaders in this field are considering business aspects of delivery to an even greater extent than formerly. Certainly no one would suggest that members of this association have neglected delivery problems. On the contrary, the association formed an affiliated organization, the Retail Delivery Association, some years ago to work in this field.

Motor delivery was one of the chief topics discussed in a general session devoted to "Reducing Expense by the Elimination of Waste," and other aspects were treated during a meeting of the Retail Delivery Association held during, and as a part of, the convention.

Keeping the older trucks that might be traded-in on new equipment and using them as extra trucks during rush times, especially Christmas, was advocated by C. G. Hobart, Wieboldt Stores, Inc., Chicago, Ill. It is not recorded that any truck dealers were present during this session, otherwise there might have been many heartfelt "Amens" along with the applause.

Reducing the number of helpers and training the remainder as substitute drivers for Christmas rushes saved more than 6 per cent on delivery cost, according to the same speaker. He also reported that truck washing equipment was saving from $250 to $3,000 per year for department store fleets.

Crankcase oil reclaimers were discussed by several speakers, as means of reducing expense, and one speaker, J. R. Kreisa, Coca-Cola Bottling Co., New York, N. Y., read a paper on the subject. After describing various types of oil reclaimers he summed up the advantages of reclaiming oil by saying: "Reducing the cost of lubrication is the least of the economies of oil reclamation. If we should check the increased mileage, due to better lubrication, that accumulated between overhaul periods, we would probably find a reduction of 30 per cent in engine reconditioning cost during the life of the vehicle."

H. P. Tepperman, L. Bamberger & Co., Newark, N. J., described a new body designed for use in the fleet in his charge. He urged fleet operators to start a concerted effort to induce truck manufacturers to standardize chassis loading spaces so that bodies might be interchanged from chassis to chassis. Such standardization would increase sales of trucks because "fleet owners would make more frequent additions to their equipment if this body change were possible."

Truck, tractor and trailer service between store and warehouse and relay delivery station saved money for Woodward and Lothrup, Washington, D. C. J. A. Buete, service director, related that two tractors with trailers were taking the place of four 2-ton trucks and giving better service.

Operation of a delivery fleet on a business basis was discussed by Nat Mallouf, Mallouf Haulage & Maintenance Corp., New York, and driver training was treated by H. E. Baldwin, James A. Hearn & Son, Inc., New York. The respective fields of solids and pneumatics on electric vehicles were described by Joseph McLaughlin, The Eleto Co., New York, and lead and alkaline batteries for electric trucks were discussed by Theodore Taylor, Stern Bros., New York.

SELL THE PUBLIC

Selling trucks is an every-day task of the salesman, dealer and distributor. The task of selling the public on the truck is equally important.

Unfortunately the truck has come to be regarded by the public as a highway nuisance and not as the vital unit it is in our present-day distributing scheme; a unit without which the public would suffer untold hardships.

In this article the author emphasizes the need for dissipating such injurious public opinion by converting it to a correct conception of the truck and its utility to society. How this can be accomplished is simply yet powerfully told and well worth the time required to read it.

By T. R. DAHL

SECRETARY, THE WHITE COMPANY

AN editorial in one of the Cleveland evening newspapers of Nov. 19, 1929, finishes up this way—

"It is emphatically not to the credit of this state if its main highroads are too dangerous to be traveled by a lone vehicle, even though it is a truck."

This stepchild of the motor industry is the same truck that was classed with firearms and handcuffs in the late Federal excise tax law.

Is this the general opinion of the motor truck?

I am firmly convinced from my own experience in driving a car, from opinions expressed by motorists and by the attitude of lawmaking bodies toward the truck, that the general public regards the motor truck as a road hog; that it slows up traffic because it does not keep far enough over on its own side of the road; that it does not get over when signaled; that it carries overhanging loads that are not properly guarded or marked; and that in general the truck is driven in a manner suggestive of "get out of my way or get run over." A public that has that opinion of a utility must believe that the public policy of truck operators is "the public be damned!"

This is a terrific indictment of a utility using a public right-of-way, and unless it wishes to be convicted before the bar of public opinion it must convert the public to an entirely different notion of the motor truck. Two things must be accomplished to effect public conversion. One thing is to give the public a real conception of the motor truck. The truck must be sold to the public as an instrument for reducing the cost of living. The public must be given the picture of the use and service of the motor truck rather than its physical appearance. Bear in mind that the use of motor trucks, the jobs which they do, are not understood by the public which is not as closely associated with the trucking business as is the operator. This picture of the motor truck can be put in the public's mind because it is based on facts.

The public generally appreciates that we are enjoying a period of great prosperity largely because costs of manufacture have been reduced tremendously by the application of mass production to industry. We can expect small, if any, further economies in production costs. Mass production has probably reached its limits of economy because it has produced such quantities of goods that the cost of distributing products is eating into production economies. If prosperity is to continue, therefore, we must look elsewhere to keep down prices of goods and the cost of living.

Economists generally agree that that part of the cost of living known as distribution costs must now be subjected to the microscope. The United States Department of Commerce, as a result of its investigation, has estimated that over ten billions of dollars were lost or wasted in this country last year through excessive costs of distribution. In all cases of great necessity a man arises or a thing is found to meet the need. The need for economical distribution is met by the motor truck. Its job is to decrease the cost of things you buy by decreasing the cost of distributing such things. The cost of delivering to your home is only a small

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ON MOTOR TRUCKS

. . . FAMINES
DUE TO FAILURE OF TRANSPORTATION
FACILITIES, ARE A CALAMITY OF THE PAST,
FOR THE MOTOR TRUCK TODAY CAN GO
PRACTICALLY ANY PLACE. . . . . .

ALUMINUM WINS

Greater Earning Power More Than Compensates for Higher Initial Cost of Bodies, Operating Experiences Prove

By MARTIN J. KOITZSCH

Operating Costs of Aluminum Equipped Fleets

	Fleet No. 1	Fleet No. 2	Fleet No. 3
Estimated weight saving by using aluminum, available as additional pay load	2,000 lb.	1,500 lb.	3,000 lb.
Average mileage per trip	31.1 miles	45 miles	100 miles
Trips per day	10	12.5	1
Average pay load per trip, steel body	22,000 lb.	12,000 lb.	40,000 lb.
Days required to gain one day's work of steel body	11 days	8 days	13.33 days
Total operating days per year	285 days	200 days	300 days
Days work gained per year	25.9 days	25 days	22.5 days
Operating cost per truck per day	$20.43	$25.03	$34.41
Cost saved per truck per year	$529.14	$625.75	$774.00
Added investment for aluminum	$700.00	$537.00	$660.00
Gain in capacity for additional investment	9.1%	12.5%	7.5%
Return on additional investment	75.6%	116.5%	117.3%

FLEET NO. 1 IS COMPOSED OF SEVERAL 7½-TON MACKS OWNED BY J. J. DUNN COAL CO., CHICAGO AND USED IN CITY COAL DELIVERY SERVICE. THEY ARE EQUIPPED WITH DUMP BODIES AND WOOD HYDRAULIC HOISTS. FLEET NO. 2 CONSISTS OF 14 6½-TON MACKS OWNED BY THE ROGERS SAND CO., PITTSBURGH. THIS FLEET IS EQUIPPED WITH FIVE YARD DUMP BODIES LOADED TO CAPACITY EACH TRIP. FLEET NO. 3 IS OPERATED BY E. H. SCOTT TRANSPORTATION CO., ERIE, PA., IN GENERAL FREIGHT TRANSPORT SERVICE. THE COMPANY HANDLES 1,500,000 LB. OF FREIGHT ANNUALLY BETWEEN CLEVELAND, BUFFALO, NEW YORK AND TOWNS EN ROUTE. INCLUDED IN THE FLEET ARE 18 MACK 3½-TON TRUCKS AND SEVERAL 3-TON TRAILERS. THIS EQUIPMENT OPERATES UNDER HEAVY LOADS ON RIGID TIME SCHEDULES, OFTEN FROM 20 TO 24 HOURS A DAY. THE OPERATING FIGURES ARE PUBLISHED THROUGH THE COURTESY OF NIELSEN SURVEYS.

ALUMINUM ALLOY IS USED INSTEAD OF ARMOR PLATE IN THIS BULLET-PROOF CAB MADE BY MACK FOR THE MOTOR HAULAGE CO., BROOKLYN. TWO SHEETS FROM THE WALLS; GLASS IS SHATTERLESS; AIR FOR VENTILATION ENTERS UNDER THE OVERHANGS OF THE ROOF AND IS EXHAUSTED BY A CONNECTION TO THE FLYWHEEL FAN OF THE ENGINE AND DOORS ARE HUNG FROM A RAIL FOR SLIDING AND PULLING IN POSITION WHEN CLOSING

TODAY aluminum alloys as a material for use in the construction of commercial bodies are firmly entrenched. An experiment only a few years ago, the use of aluminum in the truck field has developed with such remarkable rapidity that today it is not only accepted by operators but constitutes a very serious challenge to other body-building materials, such as wood, steel and various compositions.

Now that the pioneering days are history and operators are convinced from their own experience of the economies of aluminum, great strides in this still comparatively young activity may be expected in the near future. Indications of popularity are manifest everywhere: Standard body types are being used in greater numbers; fleets entirely equipped with aluminum bodies are springing up; more body builders have launched into the field; new uses for aluminum in body equipment are continually being announced.

The advantages that have brought about this great advance are in the main based on savings in weight. Aluminum is about 1/3 the weight of steel and aluminum-built-bodies weigh about half the weight of steel and/or wood bodies. Every pound saved in weight of a body, of course, adds one to payload. An operator has the option of capitalizing this saving either by increasing the payload of his vehicle or by reducing the gross load his chassis is required to carry. Savings in operating costs and operating time are made possible because less gross load for a given service betters performance and increases speed. Lighter weight bodies also enable operators to use lighter capacity chassis for a given job. In states where gross weight limits are imposed aluminum equipment permits operators to carry greater payloads and still keep within the law. Other advantages include greater scrap value of junk aluminum

OVER OPERATORS

2

FIG. 2—BY USING CELOTEX BETWEEN SHEETS OF ALUMINUM, THE WANGLER CO., PITTSBURGH, DESIGNED AND BUILT THIS INSULATED JOB FOR THE RIECK-McJUNKIN DAIRY CO. IT IS 12 FT. 5 IN. LONG, 57 IN. WIDE AND 54 IN. HIGH AND WEIGHS 2300 LB., 900 LB. LIGHTER THAN A SIMILAR BODY IN STEEL AND WOOD

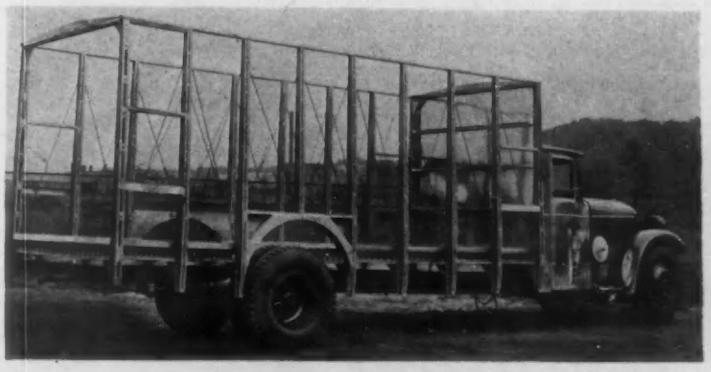

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FIG. 3—MADE ENTIRELY OF ALUMINUM EXCEPT THE FLOOR, THIS JOB, BUILT BY RAUCH & LANG, INC., CHICOPEE, MASS., FOR THE FISK RUBBER CO., WEIGHS 3000 LB., HALF THE WEIGHT OF THE SAME BODY IN WOOD AND STEEL. BEAMS AND CROSS-BARS ARE ALUMINUM, RIVETED AND GUSSETTED. SHEETS OF 14 GAGE OR ⅛ IN. THICK ARE USED FOR THE SIDES AND ON THE FLOOR. TARPAULIN IS USED TO COVER THE OPEN TOP. IT IS 18 FT. LONG, 7 FT. 3 IN. WIDE AND 7⅛ FT. HIGH

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FIG. 4—GUSTAVE SCHAEFER WAGON CO., CLEVELAND, USED ALUMINUM PANELS ON THIS DE LUXE JOB OF THE HIGHBEE CO. TO SECURE ATTRACTIVE FINISH

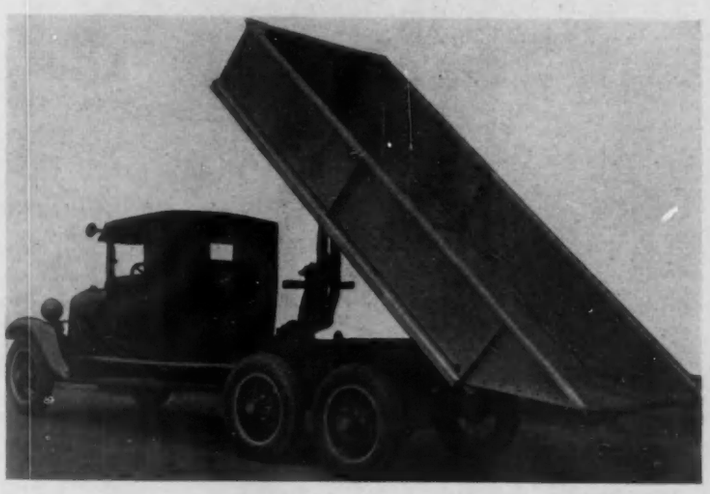

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FIG. 5—THIS GARBAGE BODY, MADE BY THE AUTO TRUCK EQUIPMENT CO., PITTSBURGH, WEIGHS 650 LB., OR 950 LB. LESS THAN SIMILAR BODY IN STEEL. THE SUB-FRAME IS MADE OF 3 IN. ALUMINUM CROSS-BEAMS AND 4-IN. LONGITUDINAL I-BEAMS

than wood or steel and savings resulting from the elimination of painting and repainting. The fact that aluminum maintains a pleasing appearance without the necessity of painting removes this item from the cost of maintenance.

In view of these many impressive advantages, those not close to the development of aluminum alloys for commercial use may reasonably inquire why the trucking industry has waited until this late date to utilize this obviously valuable material more extensively. The answer is not surprising and quite understandable. Three retarding factors, were responsible: Question as to the serviceability of aluminum; high first cost and lack of knowledge of the use of aluminum on the part of body builders.

To remove the first factor, the Aluminum Corp. of America recently completed a test to once and for all settle the question of the skeptic: "Will aluminum stand up as well as steel in the face of severe duty?" The result was a triumph. The company had a special 3½-ton dump body made in September, 1928, for use in its own plant. It was made entirely of aluminum with the exception of the floor. To note the relative wear when subject to abrasion, half the floor was made of 3/16-in. aluminum plate and the other half of 3/16-in. standard steel. This job has been in continuous interplant service, operating under maximum loads of

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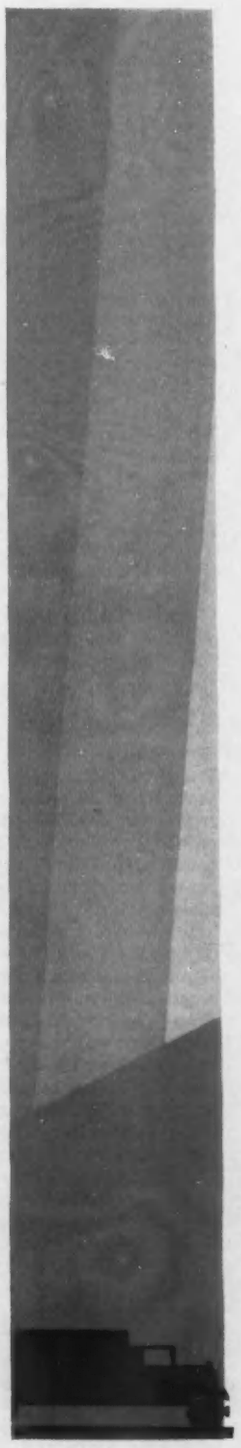
NEW L. C. L. SERVICE

But the Truck Will Continue to Play a Significant Role As Container Idea Develops

By G. LLOYD WILSON

PROFESSOR OF COMMERCE AND TRANSPORTATION, UNIVERSITY OF PENNSYLVANIA



Last month the author of this article pointed out that the container car system, where employed, has achieved great economies in handling less-than-carload shipments of freight. He also presented a sketch of the various types of containers in use and briefly discussed pioneer services.

In this concluding article he not only discusses the advantages and problems of the system and its effect on the trucking field, but has attempted to build up step by step the warning that the trucking fraternity had better follow this development carefully in order to anticipate adjustments which conditions may make necessary.

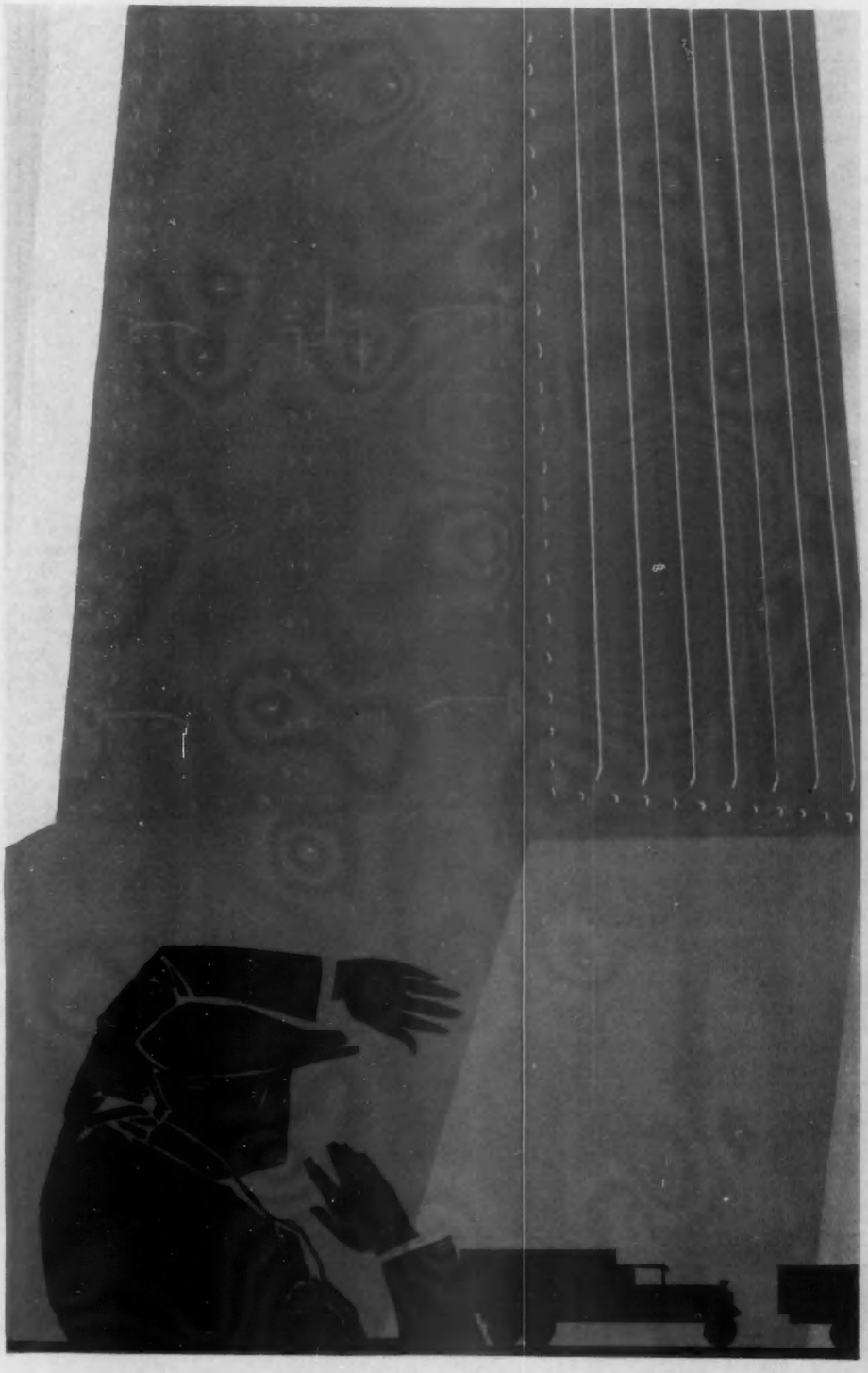
MOTOR truck manufacturers, distributors and dealers and the operators of motor freight services naturally are interested in the development of the container system of handling less-than-carload freight shipments. This system of freight handling is the first radical departure from the traditional method of handling less-than-carload merchandise freight made by the railroads in the past 50 years. The move is a significant step in the efforts of the railroads to recapture some of the merchandise traffic lost by the rail to the motor carriers, and if the experiments continue to meet with the degree of success so far attained the struggle between the rail and motor freight services for small quantity freight traffic will take on new aspects.

The railroads view less-than-carload or, as it is usually designated, l.c.l., traffic with mixed emotions. The traffic is often unprofitable in and of itself but it adds traffic which when considered as a whole can be handled profitably. Less-than-carload service must be performed at certain stations and if a substantial portion of the traffic is lost to the motor carriers the cost of rendering the service in connection with the remainder of the l.c.l. traffic rises to prohibitively high levels per unit of traffic handled.

In a typical good railroad freight traffic year, 1926, the Class 1 railroads used 25.04 per cent of their total freight car equipment and a considerably higher percentage of their box freight cars, in order to transport their less-than-carload freight traffic, which amounted to only 2.78 per cent of the total freight tonnage handled by all Class 1 railroads. The loss and damage claims paid by these carriers in connection with less-than-carload traffic amounted to 28 per cent of the claims paid in connection with all traffic. A little less than one-thirty-fifth of the total tonnage required a little over one-fourth of the freight car equipment and more than one-fourth of the entire sum paid out in claims.

Of course, since the railroads' l.c.l. rates are higher per 100 lb. than the rates upon carload traffic, the less-than-carload business makes a little better showing when revenues are compared. In 1928,

MENACES TRUCKERS



the last year for which the Interstate Commerce Commission has compiled figures, the l.c.l. tonnage amounted to 2.9 per cent of the total tonnage of Class 1 railroads, while the revenues from this small quantity traffic amounted to 10.6 per cent of the total freight revenues of these carriers. The figures for 1929 will not be far from those of 1928.

Class 1 railroads, by the way, are those which earn railway operating incomes exceeding $1,000,000 per year. Virtually all of the railroads of any considerable size are Class 1 carriers. The railroads' less-than-carload freight problem is something like the problem of the boy who had the live lion by the tail, afraid, sometimes, to let go and afraid, at other times, to hold on.

The railroads are attracted to containers as means of reducing the cost of handling l.c.l. traffic and as a possible aid in regaining some of the lost less-than-carload tonnage which has been lured to the motor trucks. Specifically, the handling of l.c.l. freight in containers offers the following advantages to the rail carrier:

1. The virtual elimination of loss and damage claims as a result of the superior protection afforded by containers.
2. The reduction in the cost of handling the freight arising from the elimination of from two to four or more handlings of the goods.
3. The reduction in clerical expense due to the fact that only one bill of lading, way-bill, freight bill, arrival notice, receipt and other papers are needed to cover an entire container load of goods which might require 20 or 30 sets of shipping papers if shipped as standard less-than-carload shipments.
4. The heavier loading of cars containing merchandise freight. In the testimony in the Container Car Case before the Interstate Commerce Commission (Docket No. 21723 and I and S 3198), the New York Central Railroad presented evidence showing that the average of 438 l.c.l. box car loadings for 24 movements between 12 eastern cities was 11,231 lb. per car, while the average of 381 loaded container cars was 22,773 lb., more than twice the average l.c.l. box car loading.
5. The reduction of certain auxiliary or accessorial services such as switching, line haul and car maintenance cost. These savings are the result of heavier car loadings when the goods are carried in container car lots rather than in regular l.c.l. merchandise car units, fewer cars being required to handle the same volume of traffic in container cars than in standard box cars.

The use of container cars by the carriers is not of advantage to the carriers only; the shippers also derive a number of benefits of tangible value. Shippers who can load full container lots of merchandise from their places of business to consignees at one destination point obtain the following advantages from the use of container car service:

Lower rates per net weight unit of goods.

Reduction in packing and boxing costs.

The elimination of outside containers, thus reducing the gross weights of shipments.

Faster movement of the goods.

The reduction or elimination of loss and damage.

Relief from the necessity of tracing l.c.l. shipments through transfer stations.

The reduction of the amount of clerical expense due to the reduction in the number of bills of lading required to cover the shipments. One bill of lading only is required for a full container load which otherwise might require several or a number of bills of lading.

The elimination of several intermediate handlings of the freight.

The use of container lots at moderate rates in place of carload service in connection with smaller unit shipments which have become fashionable since the advent of small inventories and quick service. Container service affords an intermediate rate service for such shipments coming between the regular l.c.l. rates and the lower standard carload rates.

A large number of shippers, however, are unable to take advantage of the regular railroad container car services due to the inability of the shippers to forward full container lots to one destination. Testimony was offered in the Container Car hearings before the Interstate Commerce Commission that only 150 shippers of 18,000 potential l.c.l. shippers in New York used container car service. (Testimony of G. C. Woodruff, then assistant freight traffic manager, New York Central Railroad, p. 156.) Other estimates have been made that about 5 per cent of the container traffic comes from individual container lot shippers and 95 per cent from the forwarding companies which collect individual l.c.l. shipments and forward them as container lots to destination, and distribute the shipments to the individual consignees. Those who cannot use the straight container car services are given rates by the forwarding companies somewhat under the prevailing railroad less-than-carload rates. A typical set of rates offered by one large forwarding company using container car service is less than the standard less-than-carload rates by the following differentials:

Railroad Rates	Forwarding Company's Container Car Rates
First Class	10% less
Second Class	8% less
Rule 25	6% less
Third Class	6% less
Rule 26	4% less
Fourth Class	4% less

Shippers using the container service of forwarders sometimes are able to reduce the amount of packing required to protect the goods, as in the cases of shipments of textiles and shoes, which are sometimes accepted by the forwarders from individual shippers in less than container lots to be shipped in solid container lots of these commodities. This practice is, however, the exception rather than the rule. Generally, shipments made through the forwarders are handled, so far as the shippers are concerned, in the same way as regular l.c.l. freight. The principal

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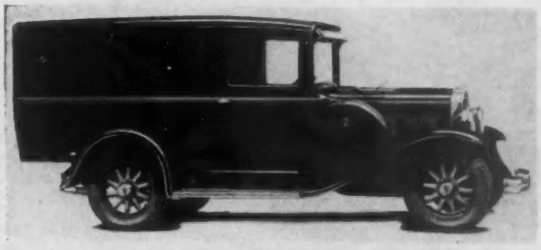
NEW L. C. L. SERVICE MENACES TRUCKERS

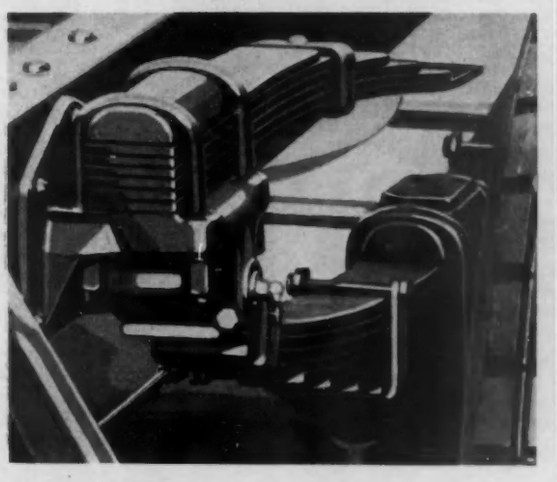
NEW RUGBYS INITIATE DURANT'S TRUCK DRIVE

Offers Delivery Model at $655 and 1-Tonner at $865

Specifications of New Rugby Models

Model	614	615
Price	$655	$865
Tonnage rating	½-ton	1-ton
Gross weight rating	4150 lb.	6150 lb.
Chassis weight	2150 lb.	2900 lb.
Wheelbase	112 in.	135 in.
Tires, front	5.00/19	5.50/20
rear	5.00/19	32x6
Engine, make	Continental	Continental
size	3¼x4 in.	3¼x4 in.
displacement	199 cu. in.	199 cu. in.
hp. and r.p.m.	57 @ 2800	57 @ 2800
piston material	Aluminum	Aluminum
type	Invar Strut	Invar Strut
Starting, lighting and ignition	Auto-Lite	Auto-Lite
Carburetor, make	Stromberg	Stromberg
feed	pump	pump
Gasoline tank, capacity	11 gal.	14 gal.
Clutch, type	plate	plate
Transmission, make	Muncie	Brown-Lipe
speeds and mounting	3-unit	4-unit
Universals, make	Spicer	Spicer
number	2	3
Rear axle, make	Own	Timken
drive	spiral bevel	spiral bevel
type	full floating	full floating
Ratio, standard	4.4 to 1	5.375 to 1
special	6.625 to 1	7.28 to 1
Steering gear, make	Muncie	Muncie
type	worm and sector	cam and lever
Service brakes	four-wheel Steeldraulic	four-wheel Steeldraulic
Hand brake, location	transmission	transmission
Springs, size, front	36x1¾ in.	36¼x2 in.
standard, rear	55x2 in.	50x2½ in.
Frame, drive	5½x2x5/32	6x2½x3/16





TOP: SIDE OF PANEL DELIVERY BODY ON THE HALF-TON CHASSIS, LISTING AT $885, SHOWING ATTRACTIVE BODY LINES AND PASSENGER CAR TYPE FRONT END APPEARANCE. BELOW: AUXILIARY HELPER SPRINGS ARE AVAILABLE ON THE 1-TON MODEL AND ARE RECOMMENDED WHEN DUAL WHEELS ARE SPECIFIED FOR 1½-TON SERVICE. THEY ARE OF THE INVERTED QUARTER-ELLIPTIC TYPE AND ARE U-BOLTED TO THE TOP OF THE REAR SPRING BRACKET

INAUGURATING an active truck sales campaign through its passenger car dealer organization, the Durant Motor Co. announces two new Rugby models, a ½-ton delivery chassis designated as Model 614 and a truck chassis known as Model 615, available in two capacities. The truck model when equipped with 32 x 6 in. single tires is rated at 1 ton and lists at $865 and when equipped with same size duals is rated at 1½ tons. The delivery chassis is priced at $655. Various types of stock bodies are offered in both models.

Not only are the six-cylinder engines, 3¼ x 4 in. Continentals, developing 57 hp. at 2800 r.p.m., the same in both models but are similar to those used in the Durant passenger car. Engine parts, for this reason, are largely interchangeable, making for low replacement cost in view of high quantity production. The four engine supports are of the rubber insulated type.

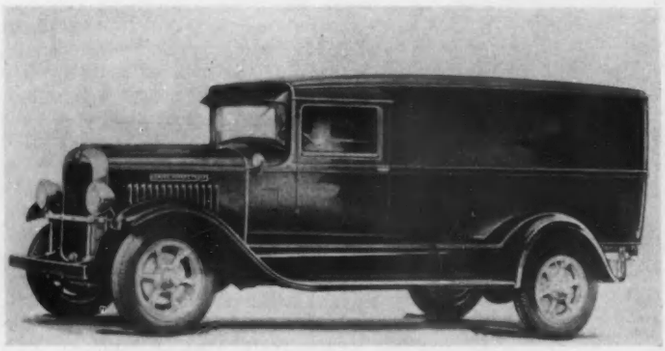
The powerplant of the delivery model includes a three-speed transmission, while the engine of the truck model is mounted in unit with a Brown-Lipe four-speed transmission, having two power take-off openings. The semi-floating, bevel-drive rear axles of both models have straddle-mounted pinions. Both models are equipped with Steeldraulic four-wheel service brakes and transmission mounted emergency brakes. Drive and torque is taken through semi-elliptic springs. To enhance front-end appearance spring horns are provided on the frame for the front ends of the front springs. Auxiliary helper springs are available in the truck model. They are of the inverted quarter-elliptic type and are U-bolted to the top of the front rear-spring bracket. The auxiliary is made up of six leaves.

The frames are sturdy, being reinforced with cross-members of the box type with wide lower flanges and are gussetted to both upper and lower frame side rail flanges. Included in the standard equipment of both models are: air cleaner, thermostat, fuel pump and filter, tail and stop lights and front bumper, electric gasoline gage and speedometer.

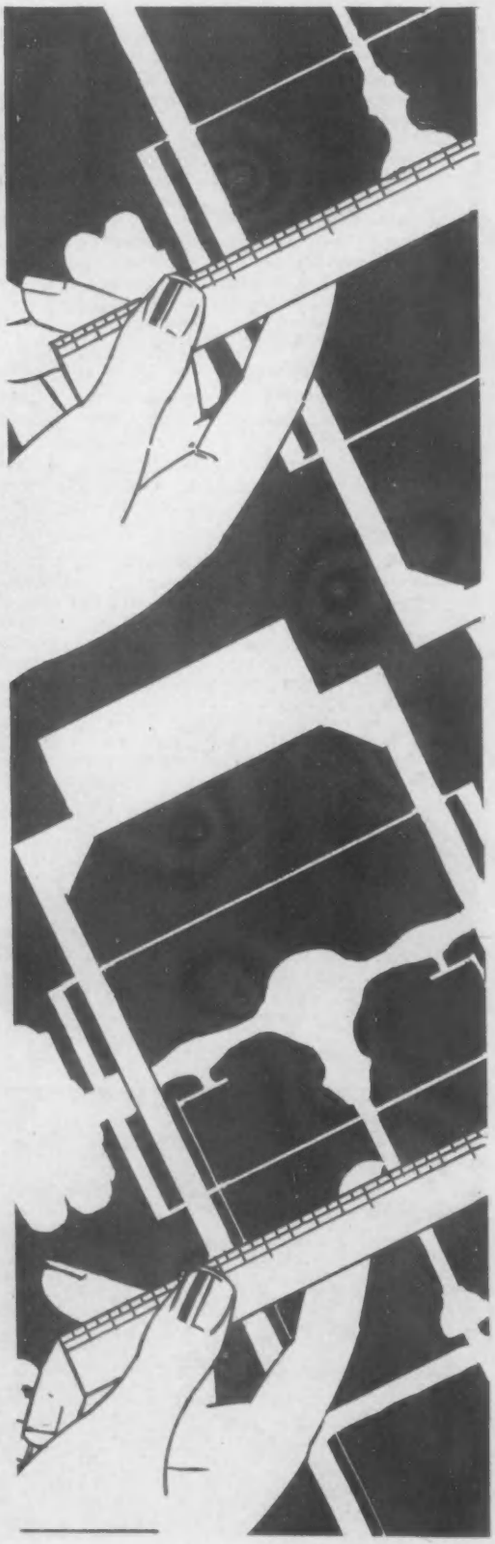
G.M.T. 1930 LINE

Table of New G.M.T. Basic Models, Giving Price, Ratings and Body Sizes

Model	Lowest Chassis Price	Wheelbases	Maximum Body Sizes (ft.)	Straight Rating (lb.)	Nominal Pay-Load (ton range)
T-11	$625	1	Special	3,800	½
T-15	695	2	7½ & 9	5,400	¾
T-17	735	2	7½ & 9	6,500	1
T-19	895	3	7½, 9 & 10½	8,500	1½
T-25	1,235	3	7½, 9 & 10½	8,500	1½
T-30	1,545	3	9, 10 & 12	11,000	2
T-42	1,845	4	9 to 15	14,000	2½
T-44	1,955	4	9 to 15	15,000	3
T-60	2,970	4	10½ to 18	18,500	3½
T-82	3,790	4	10½ to 18	22,000	4
T-90	5,885	3	15 to 21	28,000	5



MODEL T-15 EQUIPPED WITH A PANEL BODY. IT HAS A STRAIGHT RATING OF 8500 LB., APPROXIMATELY EQUIVALENT TO 1½ TONS

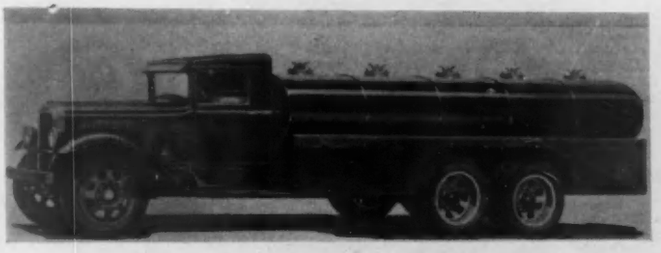


ELEVEN basic models, comprising 33 chassis covering all capacity ranges from the ½ to the 15-ton range, form the groundwork upon which the 1930 line of the General Motors Truck Co. is built. Each chassis represents a wheelbase deviation from the basic model, and when tire sizes, etc., are taken into account there are 118 different types. Of this line five basic models, comprising 14 chassis and 43 types, are new and cover the ¾, 1, 1½, 3 and 5-ton ranges. Model K has been discontinued and a six-wheel unit in the 5-ton range has been added. The 1929 models T-11, T-19, T-30, T-42, T-60 and T-60 Special, which is now known as T-82, have been retained for 1930.

Six-cylinder engines are used throughout, Pontiacs being used in models T-11 and T-19 inclusive, 257-cu. in. Buicks in models T-25 to T-44 inclusive and 331-cu. in. Buicks in models T-60 and up. Either Timken or Eaton axles are used throughout the line, spiral bevels being used in the ½ to the 2½ tonnage ranges inclusive, double reduction in the 3 ton, worm in the 3½ to 4 and tandem worm in the 5. Brakes are Bendix two-shoe, four-wheel type on all models except the T-11 which has Mid-

II Comprises 118 Types

T Series of 11 Basic Models With Load Capacity Ranging from ½ to 15 Tons Embodies Standardized Chassis Units, Load Spaces and Cabs



MODEL T-90, NEW SIX WHEEL TIMKEN TANDEM AXLE TRUCK HAS MAXIMUM STRAIGHT RATING OF 28,000 LB.

By ATHEL F. DENHAM

land Steeldraulic brakes, and the T-90 which employs Westinghouse air on both sets of rear wheels. All steering gears are of the roller bearing worm and sector type.

Frame liners or stiffeners are used on all except the T-11 and the short wheelbase Models T-17 and T-15. They consist of angle irons of the same dimensions as the upper flange and web of the side channel interior into which they are pressed and riveted at a point midway of the center of the cab to an equal distance back of cab. On Model T-90 this liner extends from center of cab to radius rod bracket. Helper springs are standard on all models from T-30 up and optional at extra cost on the T-19 and T-25. Gas tanks, supported just back of the running boards by outriggers and straps from the frame side rails, are located on the left side in the light duty models, and on the right on the others.

Gages are located on the tanks. Full specification details of chassis units will be given in the Specification Tables of the April issue.

Standardization has been made a keynote in the chassis, body and cab design of the entire line. Only six frame assemblies, five transmissions, five front springs, three front axles and three radiators are used in the chassis design. A further aid to standardization is found in the use of two hubs for all models from the T-30 up. The latter, together with the T-42 and T-44, take six-stud hubs, while the T-60, 82 and 90 take a 10-stud hub. Web steel or Michigan malleable wheels are used on Models T-19 and T-25 to simplify change-over in tire size while Models T-15 and T-17 carry Jackson Steel Products Co. standard wood wheels.

Body dimensions give further evidence of standardization. Lengths increase in increments of 1½ ft. from the 7½-ft. to the 12-ft. size, and in steps of 3 ft. from this point to the largest body, the 21-ft. size. As laid out by G.M.T. these body sizes place the center of load just about six inches ahead of the rear axle center line. Of the body equipment offered by the factory, there are 7½ to 10½-ft. screen and panel deliveries, with wheel houses designed to accommodate all trucks from the T-15 up to and including the T-30 models having single rear tires (limited to maximum of 7.50/20-in. truck balloons). Other bodies offered include a slip-on 7½-ft. express body for the T-19 1½-ton range, and 9 to 12-ft. bodies without wheel housings of the following types: open express, platform steel stake, platform body, and platform with stock racks. Canopy top express, grain sides, etc., are available at extra cost.

Cabs are interchangeable on all chassis except the T-11 delivery unit. All frames except T-11 are from 34 to 34⅛ in. wide. Both standard and de luxe types, follow closely in dimensional design that of passenger coupe bodies and embody narrow windshield pillars, ventilating windshield passages, cadet visors and air holes in seat cushions.

Steering posts are adjustable, windshields swing outward and instrument panels are indirectly illuminated and temperature indicators are included in the medium and heavy duty models. Cab frames are of wood and steel and the cab itself is three-point mounted. De luxe cabs are additionally equipped with windshield wipers, cowl ventilators, and fitted with chrome plating and leather interior trim.

Model T-90, the new 5 to 7½-ton range six-wheeler embodies a Timken tandem four-wheel worm drive unit, which was described in the May issue of COMMERCIAL CAR JOURNAL, page 38. It is powered by a 331-cu. in. engine, a specially designed five-speed Brown-Lipe transmission three-point mounted semi-amidships. The mounting consists of a ball joint on the clutch housing and two brackets attaching to the frame side rails at the rear. The gearshift lever is mounted on a forward extension of the gear case. Ball bearings are used for shaft mountings. Gear reductions range from 8.82 to 1 in first to 1.91 to 1 in fourth with direct in fifth. The axle ratio is 9.25 to 1 standard, and 10.33 to 1 optional.

The straight rating method adopted last year is continued this year. The 11 basic models have a definite gross load rating (straight rating) as formerly, but this represents the total gross weight for which the truck chassis has been designed, irrespective of tire size. Tires having a greater capacity than the total gross weight rating of any chassis are limited by the respective rating. For smaller tires, or where single wheels are used in place of duals, the recommended gross load rating is reduced to the tire limitation.

MACK 1-TONNER COMES IN FOUR BODY TYPES

Model BL Has Timken Bevel and 4-Wheel Lockheed Brakes

A NEW 6-cylinder chassis for fast, light capacity service, known as the Model BL, has been added to the line of Mack Trucks, Inc., 25 Broadway, New York. It is rated at 1 to 1½ tons capacity and is offered with four standard body types designed to blend harmoniously with cowl and hood. De luxe appointments, finish in gay colors together with pleasing lines give the new BL model a smart and attractive appearance. In addition to such features as a six-cylinder engine, four-speed transmission, four-wheel Lockheed hydraulic brakes and a Timken bevel drive rear axle, this new model is also furnished with an electric gasoline gage, thermostat and radiator shutters, Electrolock switch and Air-Maze air cleaner.

While 6.00/20-in. balloon tires, single front and dual rear, are standard with this model, five optional tire combinations are available:

Front	Rear
6.00/20 Balloon	6.00/20 Balloon, Dual
6.00/20 Balloon	34 x 7 Pneumatic, Single
6.00/20 Balloon	8.25/20 Balloon, Single
30 x 5 Pneumatic	30 x 5 Pneumatic, Dual
30 x 5 Pneumatic	34 x 7 Pneumatic, Single

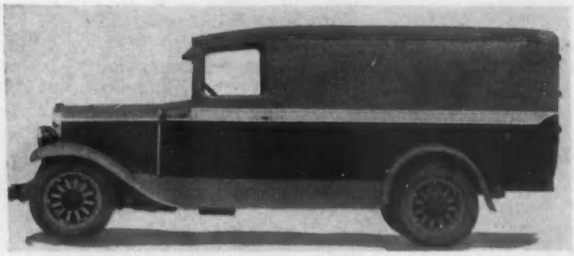
The powerplant consists of a 6 cylinder 3¼ x 5-in. L-head engine developing a maximum horsepower of 62.5 at 2800 r.p.m., mounted in unit with multiple disk dry clutch and a 4-speed transmission equipped with such auxiliaries as standard S.A.E. tire pump and power take-off opening, cast-in oil level spout and built-in speedometer drive. Valves are of the flat seat type and metric spark plugs are employed. Ignition is by battery system with semi-automatic advance. Power is transmitted through a two-piece 2-in. tubular driveshaft equipped with four Spicer universal joints to a full floating spiral bevel drive Timken rear axle offered in four reduction ratios.

The frame, which is of the "bottle neck" type, in which the side rails narrow at the front to provide a short turning radius, is made of heat-treated alloy steel 6 15/16 in. deep in the middle and tapering to 3¼ in. to the front and 4 in. to the rear. The flange also tapers from 3 in. to 2¼ in. There are two channel cross members and one tubular. Four-wheel internal hydraulic brakes are fitted, together with a mechanically operated emergency brake on the propeller shaft.

A Mack-built coupe fully enclosed cab is furnished and is distinguished by a wide door and unusual head room. Items of equipment include: Electric horn, electric head-lights with dimmer control, tire carrier, front bumper, windshield wiper, etc.

Specifications of Mack 1-Ton Model BL

Model	BL
Capacity	1-1½ ton
Weight with panel body	4765 lb.
Wheelbase	148 in.
Tires, standard	6.00/20 P
Engine, size	6-3¼ x 5
Displacement	248.9 cu. in.
Hp. at 2800	62.5
Maximum torque at 1200 r.p.m.	95 lb. ft.
Compression ratio	5 to 1
Valve arrangement	L-head
Piston material	cast iron
Number of main bearings	7
Diameter and total length	2¼ x 10 31/32
Starting, lighting and ignition	Northeast
Type	battery
Carburetor, make	Stromberg
Feed	vacuum
Gas tank, capacity	20 gal.
Location	under seat
Radiator, type	tubular
Temperature control	thermostat and shutters
Clutch, make	own
Type	multiple disk
Transmission make	own
Speeds and mounting	4-unit
Universals, make	Spicer
Type	metal
Rear axle, make	Timken
Drive	spiral bevel
Type	full floating
Ratio	4.86 to 1—5.17 to 1 5.83 to 1—6.8 to 1
Steering gear, make	Gemmer
Type	worm and cam
Service brake	4 wheel Lockheed hydraulic internal
Drum size, front, rear	16 x 2¼ in.
Hand brake, location	driveshaft
Type	external
Drum size	9 x 3 in.
Springs, size, front	40¾ x 2½-8
rear	52¾ x 2½-12
Frame size	6 15/16 x 3 x 5/32 in.
Length cab to end of frame	109 in.
Length cab to C/L rear axle	64 9/16 in.

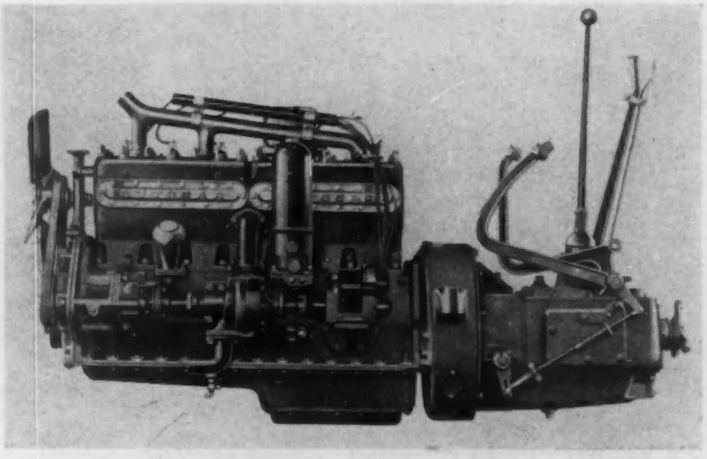


MACK BL 1-TONNER EQUIPPED WITH A DELUXE PANEL BODY. THE ENTIRE EXTERIOR EXCEPT THE ROOF IS COVERED WITH STEEL. SWEEPING FENDERS ADD TO THE HARMONIOUS EFFECT

AUTOCAR BUILDS A SHORT-STROKE SIX

Specifications of Autocar Blue Streak Six

Type	L-head
Suspension	3 point
Bore, small model	4¼ in.
large model	4½ in.
Stroke, both	4¾ in.
Crankshaft material	Chrome nickel steel
Number of main bearings	7
Main bearing diameter	3 in.
Length, front	2 in.
center and rear	3 in.
intermediate	1⅝ in.
Camshaft material	.020 carbon steel
drive	Gear
Number of bearings	5
Tappets, type	Mushroom, hollow
Connecting rod material	Nickel steel
Piston material	Cast iron
Number of rings	4
Piston pins	Full-floating
Intake valve material	Chrome vanadium steel
Diameter, head	1 15/16 in.
Exhaust valve material	Silchrome steel
Diameter, head	1 15/16 in.
Angle of valve seat	45 deg.
Valve lift	⅜ in.
Ignition, standard	Robt. Bosch magneto
optional	Battery
Governor, make	Handy
Lubrication, type	Full pressure
Filter, make	H-W Filtrator



LEFT SIDE OF AUTOCAR'S NEW SIX-CYLINDER UNIT-MOUNTED POWERPLANT. ENGINE ACCESSORIES ARE MOUNTED IN LINE AND CYLINDER BLOCK HOLD-DOWN BOLTS ARE RECESSED IN WATER JACKET

"Blue Streak" Offered in Two Sizes With Common 4¾ in. Stroke

DESIGNATED as the Blue Streak, Autocar's new six-cylinder engine, which was designed to meet the modern demand for ruggedness and power to maintain sustained speed over long distances, is available in all Autocar chassis of three tons and over.

This new six is built in two sizes, having a common stroke of 4¾ in. The smaller unit has a 4¼-in. bore, 404 cu. in. displacement and develops 90 hp. at 2000 r.p.m., while the larger has a bore of 4½ in., a corresponding displacement of 453 cu. in. and develops 101 hp. at 2000 r.p.m.

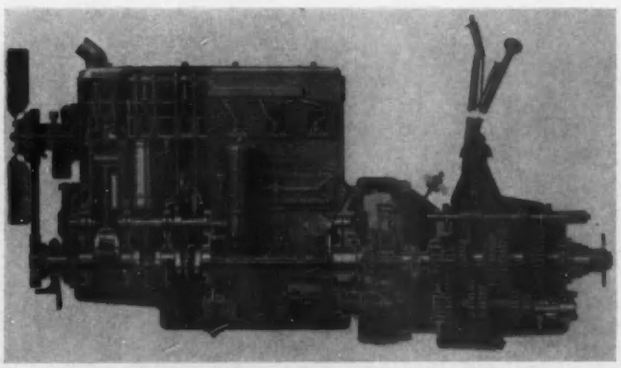
Rigidity is obtained by dropping the line of the flange joint between the crankcase and oil pan 3½ in. below the center line of the crankshaft, thus providing a deep, stiff case and by using heavy ribs across the bottom of the case, tying the crankshaft bearings to the side walls. The cylinder block is stiffened by extending the water jacket wall to the base of the block, instead of ending it midway. This construction also furnishes additional support to the base flange of the cylinder block, thereby increasing the overall rigidity of the crankcase and block assembly.

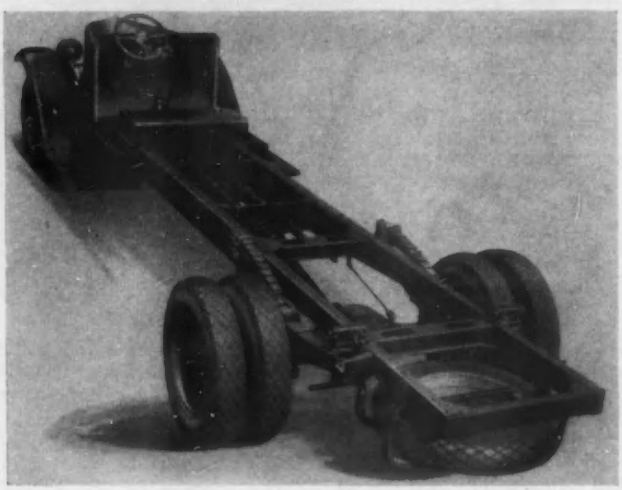
The 3-in. crankshaft, made of heat-treated, drop-forged chrome nickel steel, rotates in seven main bronze-back, babbitt-lined bearings, having a total *area* of 14½ in. Connecting rod bearings are 2½ in. in diameter. Because of the short stroke and relatively large shaft, the crankshaft journals and crank pins overlap ⅜ of an inch, producing increased crankshaft stiffness. Pistons are cast iron and fitted with three compression and one oil ring. Lubrication is full pressure, the system including drilled connecting rods to feed oil to the full-floating piston pins and as oil by-pass which provides against stoppage and freezing.

Ignition is furnished by a manually controlled Robert Bosch magneto with impluse starter, although battery type ignition with semi-automatic control is optional.

Among the other features of the engine are large volume of cooling circulation; nickel chrome iron cylinder blocks, and silchrome alloy exhaust valves.

IHC HAS REMOVABLE





LEFT: OVERHEAD VALVES ARE MOUNTED IN A TWO-PIECE CYLINDER HEAD, THE UPPER PART OF WHICH IS A WATER MANIFOLD. SPARK PLUGS ARE IN RECESSES WITH WIRES EXTENDING FROM A CONDUIT ABOVE THEM

AT LEFT BELOW: CHANNEL-TYPE CROSS-MEMBERS BRACE THE FRAME AT REAR SPRING MOUNTINGS. QUARTER-ELLIPTIC AUXILIARY SPRINGS AND REAR SHACKLE BRACKETS EXTEND SLIGHTLY ABOVE THE MAIN FRAME

TWO new speed trucks, which have been added to the International Harvester line, embody many interesting features in addition to the fact that the six-cylinder overhead valve engine with which they are powered has removable cylinder sleeves. A hollow camshaft serves as the main oil header from which oil is distributed to seven camshaft bearings and seven main bearings and in turn the crankpins. A five-speed transmission, spiral bevel gear, semi-floating rear axle and four-wheel mechanical brakes are common to both models.

Model A-5 is rated at 3 tons; Model A-4 is rated at 2 tons. A-5 is regularly supplied with 34 x 7 pneumatic tires with dual rear tires while Model A-4 is supplied with 32 x 6's all around with dual rears. Except for differences in wheelbase and rear axle ratio, other major specifications of the two models are the same.

The new engine of International Harvester design and built in the Fort Wayne works has cylinders 3⅝ in. by 4½ in. and develops 65 hp. at its governed speed of 2800 r.p.m. and maximum torque of 165 lb.-ft. at 1100 to 1400 r.p.m. It has a three-point mounting with rubber cushion rear supports.

Drop-forged of chrome-nickel steel and heat-treated, the crankshaft is balanced both statically and dynamically. Seven main bearings which have a total area of 32.57 sq. in. are of the shimless replaceable type.

The camshaft is machined all over and case-hardened. Its use as an oil header eliminates piping or tubing on the inside of the crankcase. Individual castings which are machined all over are used for the removable cylinders.

Force-feed lubrication is supplied by a gear type oil pump driven from the camshaft. Oil passes through an oil filter on the outside of the crankshaft, then through the camshaft to main and connecting rod bearings. An intermittent oil supply is forced through drilled holes in the cylinder block and a hollow cylinder head stud to the tubular rocker arm shaft through which rocker arm bushings and push rod balls and sockets are lubricated. Valve tappets are lubricated by overflow from the rocker arm shaft which flows by gravity into the crankcase.

A combined fan and centrifugal water pump is attached to the cylinder head. Water is distributed over the entire length of the head, the combustion chambers and around valve seats and spark plugs. On the plug side, water is forced downward through the block and around the cylinders. A thermostat between radiator and water manifold or upper cylinder head controls circulating water temperature. The water pump shaft which is of stainless steel carries a 20-in. diameter four-blade fan at its front end. It is mounted on double-row ball bearings and is driven by a V-belt.

Delco-Remy battery ignition is regular equipment but high-tension magneto can be supplied as an option at extra cost.

CYLINDERS IN NEW 6

Specifications of IHC A-4 and A-5

Model	A-4	A-5
Capacity	2-ton	3-ton
Wheelbase, standard	145 in.	156 in.
optional	170-185 in.	170-190-210 in.
Tires, front	32x6	34x7
rear	32x6 dual	34x7 dual
Engine, make	own	own
size	6-3⅛x4½ in.	6-3⅛x4½ in.
Hp. @ 4800 r.p.m.	65	65
valve arrangement	in head	in head
Starting, lighting and ignition	Delco-Remy	Delco-Remy
Carburetor	Zenith	Zenith
feed	vacuum	vacuum
Gasoline tank:		
capacity	21 gal.	21 gal.
location	under seat	under seat
Clutch, make	own	own
type	plate	plate
Transmission, make	own	own
speeds, mounted	5-unit	5-unit
Rear axle, make	Eaton	Eaton
final drive	spiral bevel	spiral bevel
type	semi-floating	semi-floating
ratio	6.5	7.16
torque and drive	springs	springs
Steering gear, make	Ross	Ross
Service brakes	4-wheel, internal	4-wheel, internal
Frame depth, 156 in. wheelbase		8 in.
190-210 in. wheelbase		9 in.
Universal joints, make	M.M.	M.M.

A built-in vibration damper is incorporated in the 11-in. single-plate clutch. Mounted in unit with the clutch is the transmission which provides five forward speeds and one reverse. All speeds are controlled by one shift lever. Standard take-off openings are provided on each side of the transmission case for the mounting of power take-offs or other auxiliary equipment.

Three wheelbases are available for the 2-ton Model A-4—145, 170 and 185 in. On Model A-5 four wheelbases are available—156, 170, 190 and 210 in. The 156-in. wheelbase accommodates 2½-yd. dump bodies, 9 or 9½ ft. long, while the 190 and 210-in. wheelbases accommodate 15 and 17½-ft. bodies respectively.

Two-piece propeller shafts with a self-aligning center bearing are used in the 156 and 190-in. wheelbases. A three-piece shaft with two self-aligning bearings is employed in the 210-in. job.

The Eaton rear axle has chrome-molybdenum driveshafts. The pinion is straddle-mounted with a double-row ball bearing ahead and a single-row ball bearing at the rear. Differential bearings are tapered rollers and rear wheel bearings are combination straight and tapered roller type. An adjustable thrust plug prevents deflection of the ring gear under specially heavy starting loads.

One-quarter elliptic auxiliary springs are used with long flexible main springs.

A fully inclosed cab with oak frame and sheet metal panels has been designed for the new models. It is lacquered in gray-green to match the hood and cowl. A three-man cab of the same type is available if desired.

AFTER HOURS

RED BOOK

THERE is very little similarity between selling trucks and selling passenger cars. In fact, many sales managers agree the difference is such that to compel one salesman to sell both types of vehicles produces about as beneficial results as inflicting the well-known lobster and ice cream on one and the same stomach at one and the same time. Some dealers in small towns will object, but their cases are merely proof that necessity is the mother of exceptions.

But as between the truck business and the passenger-car business, there is one point of decided similarity. That is in the purchase of trade-ins. The truck salesman as well as the passenger-car salesman must contend with prospects who want more than their used vehicles are worth in the open market, and as much of the dealer's discount as the latter is philanthropist to give away.

To help the passenger-car salesman haggle with greater chance of success, we have the Blue Book and the pocket edition Red Book. The same company now has brought out a Truck Red Book. This Truck Red Book — particularly since its need was felt and its conception abetted by the Truck Committee of the National Automobile Chamber of Commerce—must be considered in the nature of an auspicious event. As such, extended comment is in order. Of course, the commentary might be disposed of briefly by declaring that if the Used-Car Red Book has been a good thing for the car industry the Truck Red Book should prove a boon to the truck industry. However, such a statement, no matter how wise, would run the risk of being looked upon as a piece of derogatory ambiguity by the word-slingers; as a damning-with-faint-praise by the shirt-sleevers, or as a soft impeachment by classic scholars. That's because there is a slight division of opinion in the passenger-car ranks. There are passenger-car salesmen who make good use of the Used-Car Red Book. There are others who even with the help of it can't get a break with prospects. The former swear by it; the latter swear at it. There's no cause for cussing. Actually the Red Book is simply something to be applied to a particular situation. As such it has possibilities which will bear tooting.

A prospect who has a truck to trade in also has his own notion of the allowance it should bring. Being his own notion, you really can't expect the prospect to give himself the worst of it. He's liberal to a fault. As matters stood, the salesman buying the used truck was compelled to quote in his own defense a market value or appraisal price, the correctness of which he could not substantiate to the prospect's satisfaction. (Few retail sales organizations handle a sufficient volume of used motor trucks of the various makes to serve as a guide in accurately calculating allowances.) As matters stand now, the salesman has only to reach into his hip pocket, pull out the weapon, point out the national average appraisal price—and begin the bargaining. (We make that last observation advisedly because we've been following Ripley's "Believe It or Not" for a long time and we've yet to see a record of a car buyer who accepted the Red Book appraisal without argument.)

The Red Book works psychologically in the salesman's favor. Without an appraisal figure in cold print the prospect may assume that the salesman's notion of the used-truck's value is as much of a guess as his own. But the moment he is shown in black and white an appraisal figure that is based upon national experience and is much lower than his inflated demand, the prospect is faced with the necessity of justifying his own high figure. He is on the defensive, which is the best place to have a prospect when bargaining.

The Truck Red Book *can* be made a valuable selling tool. So far as the salesman is concerned it's just a matter of proper application.

The first edition of the book is based upon 15,870 used-truck sales reports from all parts of the country. Dealers are to be thanked for this cooperation, and their future cooperation in making reports should be such as to make the Red Book averages even more nationally typical. The book gives the age and market value of all models of practically all makes for the years 1923 to 1929, inclusive. The appraisals are for chassis only but the book also includes an appraisal table for bodies of the various types and sizes. Simple arithmetic will enable the salesman to arrive at a satisfactory appraisal of a complete vehicle.

The Truck Red Book is indeed a good step in the direction of helping salesmen to acquire more mastery over troublesome trade-in transactions.—G. T. H.

Announcing the CHEVROLET Roadster Delivery

The ROADSTER DELIVERY

$440

Pick-Up Box Extra

The 1½ Ton Chassis	$520
The Sedan Delivery	$595
The Light Delivery Chassis	$365
The 1½ Ton Chassis with Cab	$625

All prices f. o. b. factory, Flint, Michigan

CHEVROLET

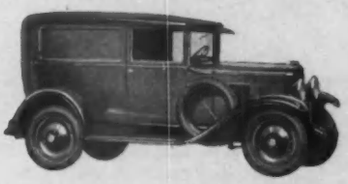
CHEVROLET now presents a new 6-cylinder Roadster Delivery . . . speedy—sturdy—unusually efficient in every way—yet *priced sensationally low.*

It is powered with an improved 6-cylinder valve-in-head motor that now develops 50 horsepower. It has a stronger rear axle—a heavier transmission—new fully-enclosed, weatherproof 4-wheel brakes—and larger balloon tires. And it is available with a wide selection of pick-up boxes.

If you are interested in getting maximum efficiency from your light delivery service—at the very minimum in cost—investigate this new *low-priced* Chevrolet Roadster Delivery.

Your Chevrolet dealer has the facts. And a trial load demonstration will provide the proof!

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

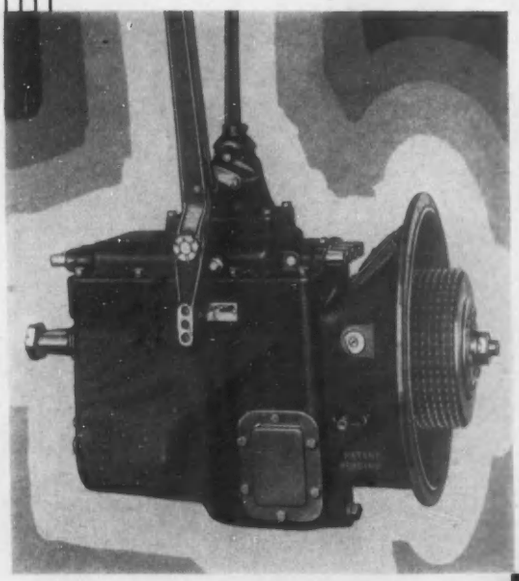


The Chevrolet Sedan Delivery, adapted from passenger car design, is widely used by specialty shops, department stores, salesmen, etc.

The Chevrolet Light Delivery chassis is available with a wide variety of smart panel bodies—suitable for almost any delivery need.

A SIX IN THE PRICE RANGE OF THE FOUR

ONE LEVER CONTROLS FULLER FIVE-SPEED



Two Combinations of Speeds Are Provided

TWO reverse speeds and five forward speeds which are provided in the new Fuller transmission are all controlled by a single gear shift lever. First speed, which is a low-low, and the two reverse speeds are engaged by latching the lever to right or left, as the case might be.

Two combinations of five forward speeds are provided. In one there are four reductions and a direct drive, and in the other there are three reductions, a direct drive and an overdrive.

Ratios are as follows:

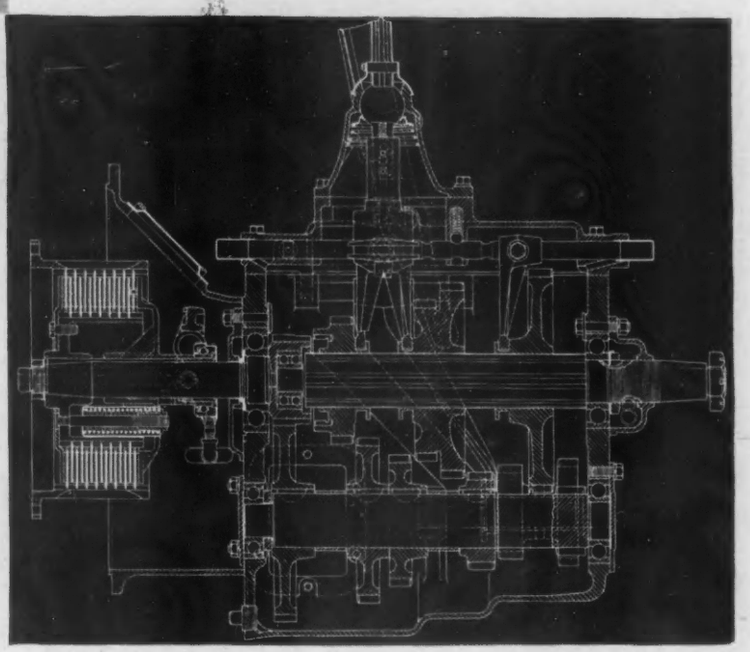
Speeds	Standard	Overdrive
5th	direct	direct
4th	1.76	.781
3rd	2.87	2.04
2nd	4.79	4.20
1st	8.07	7.07
High reverse	4.73	4.14
Low reverse	8.62	7.55

Adjuster forks for high reverse on one side and low reverse on the other side extend some distance from the center line of the transmission, and they are guided by shafts inside the transmission below and to the side of the shifter bars.

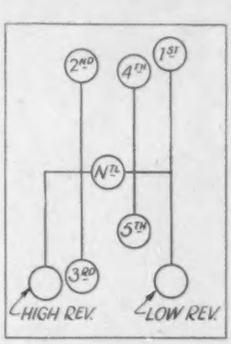
Ball bearings are used on the clutch shaft, main shaft and countershaft, and there is a double ball bearing on the forward end of the main shaft.

Flanges are furnished to fit standard SAE. bell housings Nos. 1, 2 and 3, and provision is made for a power takeoff.

The new design clutch shown in the illustration is 8½ in. in diameter and contains 16 facing multiple disks. Force feed lubrication for both pilot and throw-out bearings is provided by high pressure fittings. The clutch may be completely disassembled with a monkey wrench.



COMPACT DESIGN OF THE NEW FULLER FIVE SPEED TRANSMISSION IS SHOWN BY CROSS SECTION VIEW ABOVE. GEAR SHIFT POSITIONS ARE SHOWN IN THE DIAGRAM AT THE RIGHT. HIGH REVERSE IS ENGAGED BY LATCHING TO THE LEFT AND LOW REVERSE AND FIRST ARE ENGAGED BY LATCHING TO THE RIGHT



TWIN COACH PRESENTS HOUSE-TO-HOUSE UNIT

Integral Body and Frame Provides Low Floor Height

TWIN COACH CORP., Kent, Ohio, makers of buses, are offering a delivery unit for house-to-house service. Although it has but one engine, instead of two, which characterize Twin Coach buses, it embodies integral chassis and frame construction and other features of the buses.

The new unit is the result of study of frequent stop delivery service by Frank R. and William B. Fageol. They found many problems in this field similar to those in bus operation, including quick starts and sudden stops, need for easy entrance and exit and availability of space within bodies.

Body and frame form a single assembly, to which the axles are attached and in which the engine and transmission unit is mounted in rubber. The four-cylinder 3½ by 4¼-in. engine which was designed for this truck is placed in the forward compartment with radiator flush with front of the body.

Main body sills are 2½-in. channels placed crosswise, there being no lengthwise sills. Body posts are 1½-in. tee irons covered with 16-gage sheet steel to lower window edge and 18-gage above windows. Windows extend all around the body with curved glass at four corners. Safety glass is used in front, rear and side windows. Steel rear panels, instead of windows, are optional.

Two doors are provided, one on each side directly in back and front wheels, either sliding or folding two-piece type. A rear door, 30 in. wide, is available.

Service brakes are four-wheel hydraulic and an external transmission hand brake is provided. Both clutch and service brakes are interconnected and they may be operated either by foot or hand. Clutch pedal is pushed down rather than forward and part of its movement releases the clutch and further motion applies service brakes. A long latched lever extending above the gearshift lever likewise releases clutch and applies service brakes.

To adapt the vehicle to varying local requirements several options are available. These include: lengthening to provide extra carrying capacity $100; cork insulation of roof $50; side panel insulation $25; revolving searchlight on roof $35; tray racks built to order $25, and special painting $75.

Specifications of Twin Coach Delivery Unit

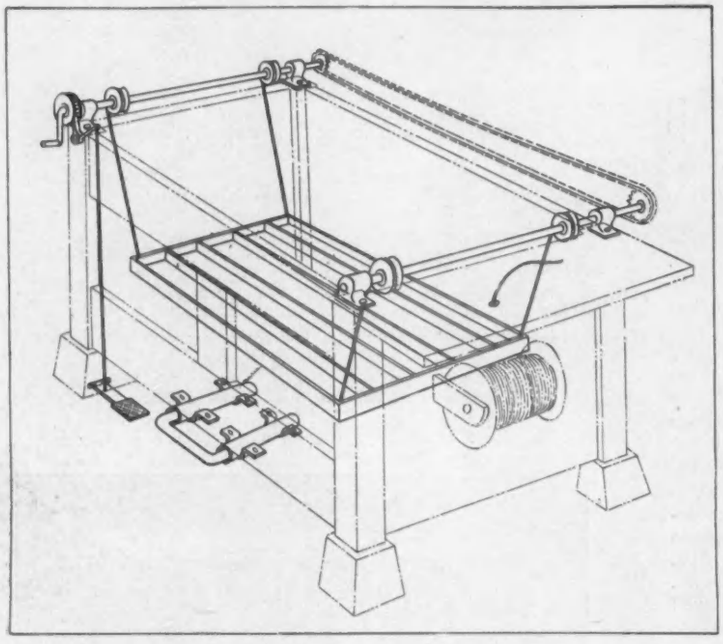
Overall length, with bumpers	174 in.
Overall width	65 in.
Overall height, loaded	88¼ in.
Front overhang	31 in.
Rear overhang	35 in.
Chassis weight	3500 lb.
Wheelbase, standard	96 in.
Body space, width	61 in.
front section, length	42 in.
headroom	49 in.
center section, length	49 in.
headroom	73¼ in.
rear section, length	58 in.
headroom	58 in.
Engine, make	Hercules
size	4-3½ x 4¼
Starting, lighting and ignition	Delco-Remy
Carburetor, make	Zenith
Radiator, make	Long
Clutch, make	own
type	plate
Transmission, mounted and number of speeds	3-unit
Driveshaft, make	Cleveland Steel Products
Rear axle, type	bevel
ratio, standard	5.6 to 1
special	optional
Steering gear, make	Ross
Service brakes	4 wheel Lockheed hydraulic
operation	hand or foot
Springs, size, all	42 x 2 in.
Tires, standard	30 x 6 in.

LOW FLOOR OF CENTER SECTION PERMITS DRIVER TO STEP DIRECTLY TO FLOOR. LEVER IN DRIVER'S RIGHT HAND CONTROLS CLUTCH AND SERVICE BRAKES, AS DOES THE LONG PEDAL. FRONT AND REAR OVERHANGS PROVIDE ADDITIONAL LOADING SPACE ON A SHORT WHEELBASE. THIS IS ONE OF THE FIRST LOT OF TWIN COACH MILK DELIVERY UNITS

SERVICE HINTS

From Shop and Factory

$5 IDEAS FOR SERVICE HINTS FROM SHOP MEN ARE WELCOME. TELL ALL ABOUT THE IDEA IN SHOP TERMS AND SEND DRAWING OR PHOTOGRAPH. FIVE DOLLARS WILL BE PAID SUCCESSFUL CONTRIBUTORS



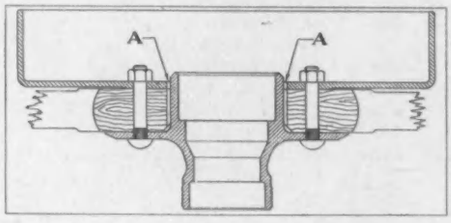
Radiator Elevator

A SUBMERGING frame, which acts as an elevator for raising and lowering radiators in a test tank, is a feature of a tank outfit used in a shop in Denver, Colo. A radiator is placed on the frame, lowered into the water for testing and brought up and soldered without removing from the frame. It then goes back for another test.

The frame is suspended from a light chain attached to each corner. A small shaft extends across either end of the tank, mounted on suitable bearings. A chain and two sprockets at rear of the tank connects the shafts together. A crank is fastened to one shaft at the front, turning the other shaft by the chain. The frame chains are connected to pulleys on the shafts. A lock is provided to hold the frame in any desired position. It consists of a Ford timing gear on one shaft which is held in position by a metal latch or dog. A coil spring keeps the dog in contact with the gear and it is released by a treadle on the floor.

Two 1 in. pipes are attached to the bottom of the tank on the outside and a light rod bent in the middle to fit into these. This rod is pulled out to act as a rest when it is necessary to stand a raditor on end. Otherwise it remains under the tank and out of the way.

The soldering outfit is secured to a curved sheet of metal, at the right, and the wire solder is wound on a wooden spool beneath a shelf on the side of the tank. A bracket is provided for holding the acetylene torch. Submitted by Jos. C. Coyle, Denver, Colorado.



Wheel Squeaks

SQUEAKS in hubs of wood wheels are not easy to locate, according to Harold F. Curran, service manager Robertson Motors, Ltd. (Reo), Halifax, N. S. These squeaks frequently are caused by excessive clearance between ends of spokes and hub, which permits a slight rubbing action between ends of spokes.

To eliminate the squeak he suggests that two holes be drilled through the drum, as shown in the accompanying sketch. Drill two ⅛ in. holes on opposite sides of the hub, as close to the hub as possible, through drum and spokes to the hub flange. Squirt raw linseed oil in one hole until the oil runs out the other hole. Let the wheel stand for at least three hours to allow oil to soak in spokes. Make sure the hub bolts are tight, wipe off excess oil and reinstall the wheel.

FLAT RATE PRICE LIST NO. 39

GMT AND REO TRUCKS

GMT

Radiator

1. Remove and replace.
   - T-10, T-11, T-19 ..... $2.00
   - T-20, T-21, T-30 ..... 2.40
   - All other T models 2.60
2. Core and tank unit, renew.
   - T-10, T-11, T-19 ..... 2.40
   - All other T models 3.00
3. Shell, renew
   - T-10, T-11 ..... 3.40
   - T-19, T-30 ..... 2.40
   - All other T models 2.00

Hose

5. Top hose, engine to radiator, renew.
   - All T models $0.80
6. Lower hose, radiator to pump or cylinder, renew.
   - All T models ..... .80

Fan

8. Fan belt, renew.
   - All T models $0.40
9. Shaft bearings, renew.
   - T-10, T-11, T-19 ..... 2.80
   - All other T models 3.00
10. Fan assembly, remove and replace or renew.
    - All T models 1.00

Water Pump

11. Water pump, remove and replace (includes fan assembly on T-10, T-11, T-19).
    - All T models $1.00
12. Water pump assembly, overhaul.
    - All other T models 3.60
    - All other models 3.60
13. Pump packing, renew all.
    - T-10, T-11, T-19 ..... .60
    - All other T models ..... .80

Manifolds

2. Exhaust manifold to cylinder gaskets, renew.
   - T-10, T-11, T-19 ..... $1.40
   - T-20, T-21, T-40, T-50 .... 2.00
   - All other T models 2.60
3. Inlet and exhaust manifold gaskets, renew all.
   - T-10, T-11, T-19 ..... 2.90
   - T-20, T-21, T-40, T-50 .... 3.50
   - All other T models 4.10
4. Renew gasket between manifold and exhaust pipe.
   - All T models 1.00
5. Renew broken stud after manifold is off.
   - All T models ..... .90

Fuel System

6. Carburetor, remove and replace.
   - T-10, T-11, T-19 ..... $1.00
   - All other T models 1.60
7. Carburetor, remove, disassemble, clean, reassemble and reinstall.
   - T-10, T-11, T-19 ..... 2.20
   - All other T models 2.40
8. Carburetor choke control, renew
   - T-10, T-I1, T-19 ..... .60
   - All other T models ..... .80
9. Gasoline tank, remove, clean and reinstall.
   - T-10, T-11 ..... 2.75
   - T-19, T-20, T-21, T-30 .... 4.00
   - All other T models 4.25
10. Clean gasoline and vacuum tanks, gas lines and strainers.
    - T-10, T-11 ..... 2.00
    - All other T models 2.40
11. Vacuum tank inner assembly, remove, inspect and replace.
    - All T models 1.20

11a. Fuel pump, remove, inspect and replace.
   - T-10, T-11, T-19, T-30, T-42, T-60, T-80 ..... .75

Muffler

12. Muffler, remove and replace or renew.
    - T-10, T-11, T-19 ..... $1.00
    - All other T models 1.20
14. Tighten muffler, tail and exhaust pipes.
    - All T models 1.50

REO

Engine Combinations

1. Remove and reinstall engine and regrind all cylinder blocks, includes: Renew all pistons, pins and rings. Align rods. Adjust mains and refit rods. Overhaul tappets and rocker arms. Renew timing chain or gears. Renew valves and guides. Clean carbon and grind valves. Clean oil lines. Overhaul oil pump, water pump and distributor. Renew high-tension wiring. Clean and tune engine.
   - F-4 ..... $99.75
   - T-6 Engines 120.00
   - F & G Engines 128.65

Note

Reo prices are continued from Price List No. 37, which appeared in the January issue, and General Motors Truck prices are continued from List No. 38 in the February issue.

Additional prices for GMT trucks will appear in an early issue.

1a. Install oversize camshaft, in conjunction with operation No. 1 add.
   - F-4 ..... 3.35
   - All other models 4.75
2. Hone or bore all cylinders, renew all pistons, pins and rings. Align rods. Adjust mains and refit rods. Repack water pump. Clean all oil lines. Grind and reface valves and seats. Tune and clean engine.
   - F-4 ..... 65.20
   - T-6 Engines 71.00
   - F & G Engines 83.35
3. Renew pins and rings. Align rods. Adjust main and rod bearings. Grind and reface valves and seats. Tune engine.
   - F-4 ..... 35.00
   - T-6 ..... 40.00
   - F & G Engines 45.30
4. Renew pins. Align and adjust rods. Grind and reface valves and seats. Tune engine.
   - F-4 ..... 28.15
   - T-6 ..... 32.50
   - F & G Engines 36.10
5. Renew rings. Align and adjust rods. Grind and reface valves and seats. Tune engine.
   - F-4 ..... 30.25
   - T-6 ..... 34.75
   - F & G Engines 38.90

Universals and Shaft

1. Universal joint, at front end of forward shaft, overhaul.
   - FE, FA, FF, FC, FD $5.00
   - G, GA, GC, GD, FB, GB, W 5.20
2. Universal joint, rear, overhaul.
   - All models 3.50

2a. Universal joint, center, overhaul.
   - FA, FE, FF, FC, FD 3.75
   - FB and all G models 4.25
3. Universal joint, at front end of forward shaft, overhaul. (Joint disconnected at transmission flange.)
   - FE, FA, FF, FC, FD 1.60
   - G, GA, GC, GD, FB, GB, W 1.80
4. Universal joint, rear, overhaul. (Joint disconnected at pinion flange.)
   - All models 1.60
5. Universal flange bolts, tighten.
   - FA, FE, FF, FC, FD, GA, GC, GD, FB, GB 1.75
7. Universal joints, overhaul.
   - Two on propeller shaft.
   - All models 6.10
   - All joints at same time.
   - FE, FA, FF, FC, FD..... 9.10
   - All others 9.65

Wheels

1. Wheel, one rear, R&R.
   - All models $1.55
   - Two on one side.
   - F & G models 2.65
2. Wheel, one front, R&R.
   - All models 1.55
3. Tram front wheels.
   - All models 1.35
4. Bearing assemblies, one front wheel, renew all inner and outer.
   - All models 3.50
5. Bearing assemblies, both front wheels, clean, repack and adjust.
   - All models 3.75
6. Rear wheels, both, tighten on shafts.
   - F-4, G, W 1.00
   - All others ..... .60

NEW TRUCK SALES

Complete New Truck Registrations for December, 1929; Totals

	Atterbury	Autocar	Brockway-Indiana	Chevrolet	Diamond T	Dodge Bros.	Fargo	Federal	Ford	G. M. C.	Gotfredson	International	La France-Republic	Larrabee	Mack	Moreland	Pierce-Arrow	Relay	Reo	Rugby	Schacht	Selden	Sterling	Stewart	Studebaker	White	Willys-Overland	Total Sales by States Including Miscellaneous
ALA.....Dec.	...	.....	7	269	.....	16	.....	1	217	13	...	27	.....	...	2	.....	.....	.....	3	.....	.....	.....	.....	.....	1	16	6	581
12 mos. 1929	...	.....	27	5,077	1	321	18	85	3,752	174	...	612	9	...	32	.....	1	2	61	4	.....	.....	.....	4	11	102	130	10,456
12 mos. 1928	...	1	26	3,513	3	424	.....	104	1,207	264	...	421	6	...	54	.....	.....	2	60	2	.....	.....	.....	.....	8	94	45	6,301
ARIZ.....Dec.	...	.....	.....	39	1	17	.....	.....	122	3	...	18	1	...	.....	1	.....	.....	1	1	.....	.....	.....	1	4	.....	1	213
12 mos. 1929	...	.....	.....	837	1	263	13	.....	1,482	112	...	151	1	...	6	1	.....	.....	45	29	.....	.....	1	5	44	20	34	3,061
12 mos. 1928	...	.....	.....	670	.....	358	.....	4	224	83	...	86	1	...	9	.....	6	6	39	3	.....	.....	.....	2	16	20	22	1,574
ARK.....Dec.	...	.....	.....	33	.....	1	.....	.....	32	.....	...	1	.....	...	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1	69
12 mos. 1929	...	.....	14	3,040	4	221	23	9	3,687	77	...	547	.....	...	12	.....	.....	3	72	5	.....	.....	.....	2	11	55	92	7,911
12 mos. 1928	...	.....	10	1,673	1	214	.....	15	703	104	...	266	2	...	17	.....	.....	1	39	.....	.....	.....	.....	2	1	64	20	3,167
CAL.....Dec.	...	8	.....	229	2	97	5	10	860	54	...	30	4	...	7	37	.....	1	72	11	.....	.....	9	1	13	21	9	1,540
12 mos. 1929	...	179	2	5,562	21	2,325	139	252	15,856	1,012	19	581	57	...	399	620	10	8	1,161	194	.....	.....	297	77	183	446	110	30,735
12 mos. 1928	...	186	1	4,301	10	3,144	4	234	3,527	1,070	...	455	64	...	376	...	8	13	1,186	31	.....	.....	230	81	119	448	69	17,439
COLO....Dec.	...	.....	.....	15	.....	8	.....	.....	36	6	...	7	.....	...	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	1	2	78
12 mos. 1929	...	2	4	2,172	1	407	70	24	2,645	257	1	486	4	...	12	3	.....	4	91	26	.....	.....	.....	1	11	52	87	6,382
12 mos. 1928	...	.....	2	1,573	9	500	1	9	613	296	...	304	3	...	9	.....	.....	1	73	.....	.....	.....	.....	.....	3	97	21	3,581
CONN....Dec.	...	1	12	50	2	27	5	5	108	18	...	18	.....	3	19	.....	.....	.....	17	.....	.....	.....	.....	3	.....	11	5	326
12 mos. 1929	...	87	120	1,923	85	698	75	64	2,506	332	...	348	4	36	387	...	17	16	538	17	8	5	16	138	54	112	100	7,828
12 mos. 1928	...	102	83	1,784	16	899	8	112	1,065	424	...	265	3	...	300	...	8	27	656	4	...	3	1	155	59	114	47	6,369
DEL.....Dec.	...	2	2	17	.....	3	.....	.....	37	6	...	.....	.....	...	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	2	.....	72
12 mos. 1929	...	15	8	464	1	47	2	2	656	77	...	88	2	...	8	.....	6	.....	33	5	.....	.....	1	3	1	15	8	1,444
12 mos. 1928	...	13	.....	340	.....	84	.....	3	207	82	...	108	8	...	8	.....	5	1	74	1	.....	.....	.....	5	4	15	8	984
D. C.....Dec.	...	1	.....	14	4	6	.....	.....	57	9	...	3	.....	...	1	.....	.....	.....	2	.....	.....	.....	.....	4	.....	11	.....	115
12 mos. 1929	...	29	22	439	49	80	1	3	1,276	103	...	56	.....	...	52	.....	4	9	41	2	.....	.....	14	32	1	63	16	2,328
12 mos. 1928	...	22	23	475	43	106	.....	4	439	113	...	18	6	...	46	.....	1	7	68	.....	.....	.....	6	1	6	36	13	1,463
FLA.....Dec.	...	.....	6	120	.....	10	.....	.....	228	1	...	9	.....	...	1	.....	.....	.....	10	.....	.....	.....	.....	.....	1	1	4	391
12 mos. 1929	...	.....	40	1,723	6	149	4	4	3,020	67	...	167	3	...	34	.....	5	.....	76	.....	.....	.....	.....	.....	10	51	31	5,395
12 mos. 1928	...	1	14	1,322	.....	226	1	22	1,421	132	...	116	.....	...	27	.....	.....	.....	101	.....	.....	.....	.....	.....	4	49	10	3,473
GA.....Dec.	...	.....	.....	76	.....	7	.....	.....	159	7	...	22	.....	...	3	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	3	2	282
12 mos. 1929	...	14	80	2,711	1	237	15	20	3,117	85	...	217	.....	...	38	.....	1	.....	54	.....	.....	.....	.....	1	9	95	2	6,768
12 mos. 1928	...	9	54	1,988	1	300	.....	25	894	90	...	155	.....	...	33	.....	1	.....	31	.....	.....	.....	.....	.....	5	126	35	3,770
IDAHO...Dec.	...	.....	.....	18	.....	3	.....	.....	34	1	...	7	.....	...	.....	1	.....	.....	1	.....	.....	.....	.....	.....	.....	1	.....	66
12 mos. 1929	...	1	.....	948	2	146	13	2	990	63	...	197	7	...	15	11	1	1	56	43	.....	.....	4	.....	6	29	18	2,572
12 mos. 1928	...	.....	.....	789	.....	258	.....	1	173	61	...	220	8	...	6	.....	.....	.....	89	.....	.....	.....	.....	.....	2	21	9	1,678
ILL.....Dec.	...	4	6	149	33	28	4	2	288	27	...	60	.....	...	11	.....	1	1	12	1	.....	.....	4	3	1	5	11	687
12 mos. 1929	...	95	130	7,135	940	1,483	162	131	10,704	659	46	2,130	26	...	290	...	13	46	574	49	.....	.....	88	33	29	244	331	26,462
12 mos. 1928	...	.....	161	6,781	743	1,647	2	158	2,868	768	...	1,538	24	...	385	...	12	14	593	.....	.....	.....	78	29	1	290	95	17,731
IND.....Dec.	...	1	10	198	.....	44	3	2	388	18	...	55	.....	...	1	.....	.....	1	14	2	.....	.....	.....	1	8	4	9	760
12 mos. 1929	...	18	214	4,582	70	780	42	53	6,388	464	...	844	1	...	18	.....	5	46	359	15	7	.....	.....	91	100	73	214	14,462
12 mos. 1928	...	15	186	4,026	45	828	6	62	2,278	596	...	683	.....	...	22	.....	3	25	367	3	.....	2	.....	65	46	59	59	9,562
IOWA....Dec.	...	.....	2	228	3	44	4	3	302	5	...	98	.....	...	2	.....	.....	.....	4	1	.....	.....	.....	.....	2	4	25	751
12 mos. 1929	...	1	45	4,744	23	528	77	31	3,713	150	...	1,408	4	...	46	.....	1	16	274	31	.....	.....	.....	1	19	35	225	11,445
12 mos. 1928	...	1	40	3,770	20	767	8	61	1,444	385	...	1,449	7	...	48	.....	.....	7	381	11	.....	.....	1	4	12	44	28	8,597
KAN.....Dec.	...	.....	1	102	.....	19	1	.....	193	4	...	41	.....	...	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	2	10	378
12 mos. 1929	...	.....	27	4,824	26	623	77	6	4,856	309	...	1,211	13	...	27	.....	.....	3	179	11	.....	1	.....	18	36	43	300	12,648
12 mos. 1928	...	.....	19	2,283	27	399	.....	.....	755	331	...	753	10	...	6	.....	.....	1	119	.....	.....	.....	.....	.....	9	15	33	4,809
KY.....Dec.	...	.....	6	115	8	14	1	.....	216	13	...	52	.....	...	1	.....	.....	1	12	.....	5	.....	.....	1	1	5	4	459
12 mos. 1929	...	7	45	2,033	57	307	31	7	2,366	192	...	500	5	...	55	.....	2	18	152	7	36	.....	.....	9	25	48	84	6,037
12 mos. 1928	...	2	30	2,069	10	419	4	24	879	228	...	344	6	...	36	.....	1	21	165	1	.....	.....	.....	7	28	58	41	4,522
LA.....Dec.	...	.....	.....	70	.....	13	.....	.....	121	6	...	30	.....	...	1	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	2	3	247
12 mos. 1929	...	3	27	2,588	14	230	7	6	3,575	121	...	550	.....	...	27	.....	.....	1	36	1	.....	.....	.....	.....	4	63	44	7,314
12 mos. 1928	...	1	5	1,201	.....	322	.....	8	1,088	159	...	483	.....	...	26	.....	2	.....	43	.....	.....	.....	.....	.....	2	54	23	3,431
ME.....Dec.	...	.....	.....	17	1	6	.....	.....	34	1	...	1	.....	...	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	64
12 mos. 1929	...	11	7	1,826	19	306	30	2	1,904	71	...	174	.....	...	34	.....	.....	.....	226	20	.....	1	15	.....	26	9	82	4,785
12 mos. 1928	...	1	4	1,452	10	393	.....	10	357	115	...	176	.....	...	33	.....	1	2	298	1	.....	.....	.....	.....	14	15	15	2,953
MD.....Dec.	...	6	12	80	7	33	4	1	171	8	...	24	2	...	4	...	...	1	14	.....	.....	.....	6	3	3	14	5	412
12 mos. 1929	1	132	84	1,836	94	428	31	54	2,799	234	...	384	21	...	211	...	3	8	229	6	...	3	59	48	19	189	45	7,055
12 mos. 1928	...	86	31	1,528	70	386	.....	52	1,076	285	...	268	35	...	248	...	3	12	276	.....	.....	4	16	34	12	138	16	4,682
MASS....Dec.	...	16	5	77	23	46	7	6	273	36	...	25	.....	...	21	.....	1	5	20	1	.....	.....	11	1	1	18	5	600
12 mos. 1929	...	298	215	3,401	178	1,373	203	165	6,996	793	1	793	97	48	471	...	18	5	598	21	5	19	193	87	54	314	137	16,969
12 mos. 1928	...	331	143	3,540	62	1,485	15	124	2,124	884	...	579	.....	...	454	...	42	6	1,081	2	...	1	84	90	52	315	62	11,809
MICH....Dec.	...	4	2	233	9	81	8	12	989	42	1	73	5	...	13	...	2	.....	50	4	.....	.....	.....	1	2	14	12	1,581
12 mos. 1929	...	58	36	7,034	73	1,039	167	248	13,171	817	39	1,095	35	...	126	...	17	14	820	35	2	3	.....	3	85	98	245	25,585
12 mos. 1928	...	53	20	6,209	35	1,342	27	287	4,848	840	...	765	68	...	172	...	16	4	969	3	.....	.....	.....	4	46	95	117	16,638
MINN....Dec.	...	.....	3	105	.....	13	3	1	250	5	...	38	.....	...	2	.....	.....	.....	4	1	.....	.....	.....	.....	1	3	5	443
12 mos. 1929	...	.....	3	3,503	22	413	67	62	5,246	212	...	1,006	.....	...	61	.....	1	9	251	12	.....	.....	.....	.....	27	84	197	11,282
12 mos. 1928	...	.....	.....	2,818	6	664	.....	65	1,838	286	...	1,037	11	...	72	.....	1	2	333	3	.....	.....	.....	.....	23	95	52	7,395
MISS.....Dec.	...	.....	.....	91	.....	5	2	.....	152	2	...	12	.....	...	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	267
12 mos. 1929	...	.....	18	3,096	.....	104	10	1	3,190	46	...	373	.....	...	2	.....	.....	.....	41	6	.....	.....	.....	.....	1	16	70	6,977
12 mos. 1928	...	2	36	1,333	1	169	.....	8	654	95	...	154	4	...	13	.....	.....	1	48	1	.....	.....	.....	.....	1	42	13	2,600
MO.....Dec.	...	1	3	155	3	39	4	1	268	14	...	23	.....	...	2	.....	.....	.....	9	1	.....	.....	3	.....	2	9	9	551
12 mos. 1929	...	41	115	5,204	240	893	71	118	6,659	544	...	973	22	...	169	...	34	6	265	32	.....	.....	31	15	49	137	245	16,047
12 mos. 1928	...	32	103	3,911	182	941	4	80	2,294	484	...	811	27	...	164	.....	4	4	309	2	.....	.....	20	1	16	139	67	9,882
MONT....Dec.	...	.....	.....	5	.....	1	.....	.....	7	.....	...	6	.....	...	17	.....	3	2	.....	.....	.....	.....	.....	.....	.....	.....	1	20
12 mos. 1929	...	6	.....	1,153	.....	243	.....	26	1,956	95	...	545	5	...	17	.....	3	2	99	19	.....	.....	.....	.....	8	39	68	4,338
12 mos. 1928	...	.....	8	2,002	.....	430	.....	14	339	178	...	829	8	...	14	.....	2	.....	174	.....	.....	.....	.....	2	2	31	21	4,102

Figures in this table are compiled by R. L. Polk & Company, of Detroit, except Illinois, which compiled by the New Jersey Motor List Co., New Car Division, of Trenton. Readers desiring

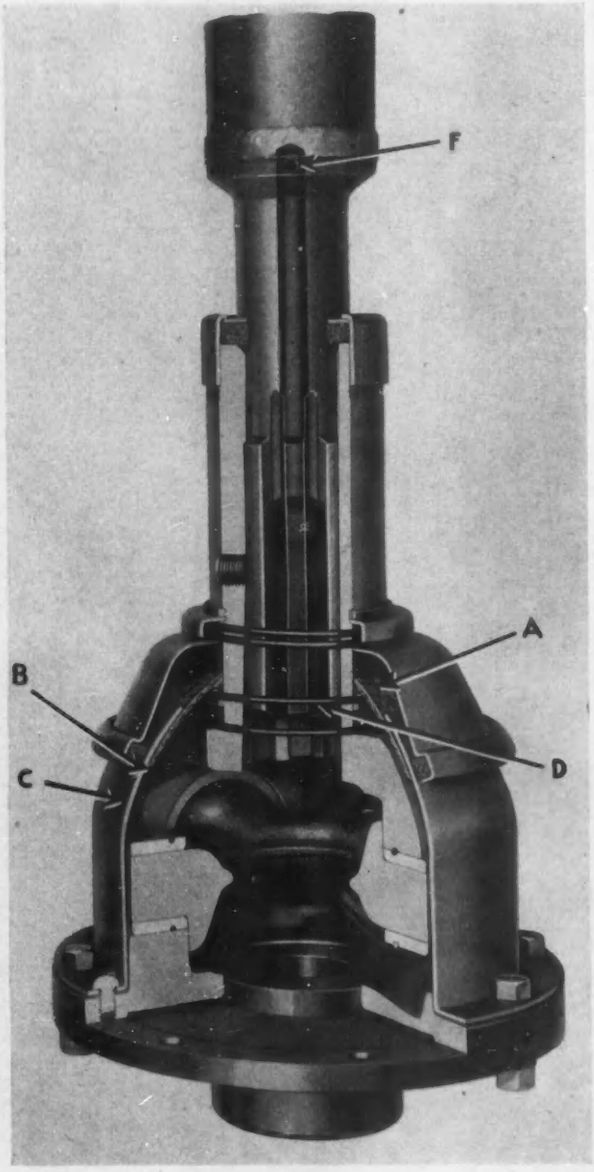
BY MAKES AND STATES

for Entire Year 1929, and Comparative Totals for 1928

	Atterbury	Autocar	Brockway-Indiana	Chevrolet	Diamond T	Dodge Bros.	Fargo	Federal	Ford	G. M. C.	Gotfredson	International	La France-Republic	Larrabee	Mack	Moreland	Pierce-Arrow	Relay	Reo	Rugby	Schacht	Selden	Sterling	Stewart	Studebaker	White	Willys-Overland	Total Sales by States Including Miscellaneous
NEB.....Dec.	...	.....	.....	90	3	7	1	.....	146	6	...	35	...	...	22	...	...	1	1	.....	...	...	.....	.....	1	.....	3	2,988
12 mos. 1929	...	.....	20	3,112	22	295	33	7	3,185	227	4	847	1	...	22	...	...	...	97	18	...	...	1	.....	24	35	134	8,144
12 mos 1928	...	.....	16	2,587	8	372	.....	7	835	317	...	806	1	...	29	...	...	2	176	.....	...	...	1	.....	15	32	19	5,315
NEV.....Dec.	...	.....	.....	13	1	13	1	.....	31	.....	...	5	...	...	.....	...	...	...	.....	1	...	...	.....	.....	.....	.....	.....	66
12 mos. 1929	...	1	.....	192	1	138	9	1	459	26	...	31	1	...	5	15	...	...	8	3	...	...	2	.....	4	8	2	934
12 mos. 1928	...	.....	.....	86	.....	112	.....	7	46	16	...	15	.....	...	.....	...	...	...	7	1	...	...	4	.....	1	5	.....	323
N. H.....Dec.	...	.....	.....	12	.....	2	.....	.....	17	.....	...	4	...	...	1	...	...	...	1	.....	...	...	.....	.....	.....	1	.....	38
12 mos. 1929	...	7	37	783	6	150	14	16	1,128	72	...	76	1	...	24	...	2	...	92	5	...	...	3	17	7	8	30	2,491
12 mos. 1928	...	3	4	751	.....	174	.....	34	218	100	...	92	.....	...	21	...	3	...	99	.....	...	...	.....	16	12	8	12	1,576
N J.....Dec.	...	.....	3	44	.....	16	2	14	92	8	1	1	...	...	6	...	...	...	2	.....	1	...	3	.....	.....	7	3	212
12 mos. 1929	...	229	244	4,670	104	1,093	157	199	6,956	584	22	442	51	11	613	...	65	26	569	42	21	18	113	68	104	354	209	17,587
12 mos. 1928	...	218	228	4,828	78	1,915	.....	257	2,113	766	...	506	11	...	697	...	42	38	1,012	.....	...	5	105	95	.....	343	.....	13,842
N. M.....Dec.	...	.....	.....	101	.....	1	.....	.....	16	.....	...	.....	...	...	.....	...	...	...	1	2	...	...	.....	.....	.....	.....	3	124
12 mos. 1929	...	.....	4	1,016	.....	111	23	3	735	44	...	112	...	...	.....	...	...	...	22	11	...	...	.....	.....	2	21	47	2,157
12 mos. 1928	...	.....	3	766	.....	160	.....	1	87	53	...	157	.....	...	.....	...	...	...	20	5	...	...	.....	.....	3	29	3	1,300
N. Y.....Dec.	1	13	50	133	19	123	25	3	425	30	...	37	1	3	37	...	185	2	39	2	...	...	16	10	14	26	14	1,038
12 mos. 1929	115	655	1,745	10,892	756	3,159	595	268	17,784	1,466	2	2,081	202	209	1,683	...	111	...	1,477	82	26	161	201	745	169	909	477	46,984
12 mos. 1928	...	450	1,468	10,794	475	4,265	13	283	5,147	1,744	...	1,669	55	...	1,682	...	199	92	1,946	14	...	74	93	690	74	1,015	236	34,297
N. C.....Dec.	...	.....	.....	157	.....	28	3	1	224	15	...	30	2	...	2	...	...	...	.....	1	...	...	.....	1	.....	4	3	476
12 mos. 1929	...	21	19	3,979	1	530	32	13	4,128	200	...	259	17	...	72	...	...	...	61	17	...	...	.....	14	11	53	67	9,618
12 mos. 1928	...	25	24	3,720	.....	790	1	25	1,345	294	...	243	48	...	40	...	1	1	172	.....	...	...	.....	9	11	53	43	7,010
N. D.....Dec.	...	.....	.....	16	.....	.....	.....	.....	20	3	...	2	...	...	.....	...	...	...	.....	.....	...	...	.....	.....	.....	.....	1	42
12 mos. 1929	...	.....	.....	1,350	9	129	22	6	1,474	106	...	889	...	...	.....	...	2	2	42	16	...	...	.....	.....	5	5	72	4,144
12 mos. 1928	...	.....	.....	2,044	1	285	.....	18	450	197	...	1,131	2	...	7	...	...	1	72	3	...	...	1	.....	3	2	21	4,267
OHIO.....Dec.	...	9	14	400	10	152	27	13	1,216	86	...	147	...	...	12	...	...	2	50	5	20	1	1	7	13	93	62	2,385
12 mos. 1929	...	186	267	7,608	121	1,417	182	160	11,745	789	8	1,596	24	1	251	1	31	44	722	44	158	12	25	79	72	665	687	27,338
12 mos. 1928	...	131	152	7,055	60	1,738	25	181	3,934	815	...	1,372	44	...	233	...	15	84	1,090	12	...	6	27	86	65	651	248	19,068
OKLA.....Dec.	...	1	1	147	2	24	3	5	158	9	...	46	...	...	11	...	...	...	4	.....	...	...	.....	.....	2	8	3	425
12 mos. 1929	...	13	65	4,782	34	731	90	91	5,169	233	...	1,037	5	...	81	...	1	2	194	5	...	28	.....	12	37	84	192	12,937
12 mos. 1928	...	.....	21	3,525	40	996	7	53	1,793	283	...	928	3	...	58	...	10	2	233	.....	...	10	.....	12	21	93	105	8,279
ORE.....Dec.	...	.....	.....	30	.....	1	.....	1	89	4	...	5	1	...	1	2	...	...	1	2	...	...	1	.....	.....	3	1	146
12 mos. 1929	...	4	.....	1,605	1	301	34	73	2,713	204	...	250	11	...	71	34	...	...	146	50	...	...	32	.....	20	101	30	5,819
12 mos. 1928	...	.....	.....	1,024	.....	431	1	93	463	206	...	194	15	...	47	...	...	...	163	3	...	...	.....	.....	9	87	9	2,941
PA.....Dec.	2	72	54	453	17	236	29	25	1,135	79	3	160	10	2	90	...	1	20	83	11	2	29	48	21	58	47	2,754
12 mos. 1929	25	668	531	8,833	276	2,672	373	212	15,379	1,033	46	1,803	87	43	946	...	33	169	1,199	89	1	15	332	445	145	687	547	37,258
12 mos. 1928	...	456	372	8,283	198	3,170	38	175	3,980	1,570	...	1,588	102	...	808	...	39	145	1,463	20	...	7	244	357	128	687	228	25,185
R. I.....Dec.	...	1	.....	17	1	17	2	.....	48	4	...	7	...	...	7	...	...	...	5	1	...	...	1	1	1	.....	2	114
12 mos. 1929	...	62	15	702	11	305	36	49	982	186	...	85	4	...	95	...	5	...	235	16	13	2	23	42	10	37	15	2,953
12 mos. 1928	...	41	12	539	4	263	3	29	388	168	...	80	1	...	35	...	5	...	195	.....	...	...	12	23	14	32	11	1,918
S. C.....Dec.	...	.....	.....	52	.....	5	.....	.....	78	.....	...	3	...	...	.....	...	...	...	.....	.....	...	...	.....	.....	.....	2	1	141
12 mos. 1929	...	.....	18	2,123	.....	160	28	36	2,057	84	...	150	5	...	15	...	...	...	16	5	...	...	.....	4	4	24	19	4,760
12 mos. 1928	...	.....	5	1,650	.....	200	.....	29	680	155	...	90	5	...	24	...	...	...	30	.....	...	...	.....	6	4	13	28	2,932
S. D.....Dec.	...	.....	.....	39	.....	2	.....	.....	58	2	...	13	...	...	6	...	...	...	3	.....	...	...	.....	.....	.....	.....	4	129
12 mos. 1929	...	.....	2	1,467	10	148	19	4	1,341	69	1	841	...	...	16	...	...	...	114	15	...	...	2	10	5	85	4,160
12 mos. 1928	...	.....	3	1,487	.....	253	.....	6	346	141	...	1,041	8	...	51	...	...	...	139	3	...	...	9	4	6	11	3,555
TENN....Dec.	...	.....	.....	23	.....	3	.....	.....	20	2	...	2	...	...	.....	...	...	...	.....	.....	...	...	.....	1	.....	.....	.....	51
12 mos. 1929	...	.....	31	2,540	16	249	9	63	2,107	209	...	309	11	...	68	...	6	...	80	2	1	...	.....	4	21	59	42	5,851
12 mos. 1928	...	8	26	1,805	4	344	1	86	526	223	...	218	11	...	78	...	1	...	106	.....	...	...	.....	.....	19	110	12	3,618
TEXAS...Dec.	...	.....	11	545	2	41	16	3	820	25	...	69	...	...	2	...	...	...	33	4	...	...	.....	.....	4	13	19	1,616
12 mos. 1929	...	60	112	13,667	46	1,100	136	52	13,531	604	...	2,612	6	...	95	...	5	36	496	56	...	...	.....	15	58	207	390	33,381
12 mos. 1928	...	59	123	9,810	8	1,510	57	70	4,376	772	...	1,706	1	...	120	...	1	44	557	9	...	...	.....	32	36	248	136	19,886
UTAH....Dec.	...	.....	.....	7	.....	8	.....	.....	27	1	...	2	...	...	.....	...	...	...	1	1	...	...	.....	.....	.....	.....	1	48
12 mos. 1929	...	.....	.....	682	.....	151	11	2	1,430	43	...	112	...	...	27	4	...	...	55	32	...	...	.....	.....	11	24	18	2,610
12 mos. 1928	...	.....	.....	549	.....	214	.....	.....	280	60	...	156	1	...	9	...	...	...	27	1	...	...	.....	.....	9	20	8	1,346
VT.....Dec.	...	.....	.....	2	2	1	.....	.....	22	5	...	.....	...	...	.....	...	...	...	1	.....	...	...	.....	.....	.....	1	.....	34
12 mos. 1929	...	.....	17	495	7	156	24	31	786	63	...	218	...	11	37	...	1	2	86	5	...	...	16	9	20	26	26	2,027
12 mos. 1928	...	1	3	565	.....	199	1	45	175	85	...	136	.....	...	29	...	...	...	134	2	...	...	34	20	23	10	1,484
VA.....Dec.	...	2	3	244	1	16	1	1	321	11	...	23	7	...	.....	...	...	...	6	3	...	...	5	1	6	3	655
12 mos. 1929	...	33	65	3,947	10	368	10	44	4,300	170	...	412	46	4	43	...	3	9	150	17	...	...	39	19	88	86	6,898
12 mos. 1928	...	11	51	2,900	4	451	2	45	1,601	248	...	249	49	...	80	...	9	22	149	1	...	3	8	5	85	27	6,055
WASH...Dec.	...	.....	.....	123	.....	27	8	4	310	22	...	20	...	...	11	3	...	1	16	7	...	...	1	.....	6	20	7	611
12 mos. 1929	...	.....	.....	2,066	.....	446	56	31	4,076	265	...	389	11	...	61	31	3	7	228	74	...	...	6	.....	32	176	91	8,325
12 mos. 1928	...	.....	1	1,617	.....	540	.....	56	661	300	...	314	10	...	84	...	3	5	345	4	...	...	.....	.....	5	134	22	4,423
W. VA....Dec.	...	.....	1	77	.....	30	.....	1	136	8	...	18	1	...	.....	...	...	1	6	1	...	...	2	1	1	2	5	298
12 mos. 1929	...	1	52	1,794	28	367	23	25	2,122	157	...	385	11	...	5	...	...	16	141	10	2	...	23	12	12	25	61	5,299
12 mos. 1928	...	1	98	1,423	14	506	2	27	517	207	...	313	13	...	15	...	6	28	184	4	...	...	2	31	9	18	39	3,536
WIS.....Dec.	...	.....	.....	125	2	23	2	5	220	16	...	23	...	...	4	...	1	9	13	2	...	...	9	2	3	6	8	475
12 mos. 1929	...	4	5	4,340	203	590	71	91	6,597	324	...	945	5	...	40	...	9	71	304	21	...	...	118	70	46	82	218	14,393
12 mos. 1928	...	.....	35	4,108	120	799	12	105	1,869	398	...	714	2	...	146	...	5	9	402	4	...	2	113	73	38	88	67	9,541
WYO.....Dec.	...	.....	1	25	.....	12	2	.....	87	3	...	9	...	...	.....	...	...	...	2	.....	...	...	.....	.....	.....	.....	1	142
12 mos. 1929	...	.....	1	392	.....	157	9	1	711	22	...	117	...	...	4	1	...	...	29	5	...	...	.....	.....	6	12	10	1,481
12 mos. 1928	...	.....	1	528	.....	178	.....	.....	115	35	...	158	1	...	19	...	...	...	32	3	...	...	1	.....	1	4	4	1,088
Total December.	3	142	215	5,380	156	1,369	173	120	11,258	637	5	1,341	34	8	280	44	5	34	537	67	26	3	93	96	107	397	320	23,271
Total 12 mos. 1929.....	141	2,941	4,533	160,892	3,590	28,567	3,383	2,853	223,405	14,248	189	31,434	815	363	6,823	726	493	713	12,894	1,230	280	267	1,577	2,163	1,661	6,121	6,536	526,835
Total 12 mos.	...	2,261	3,645	133,795	2,308	36,570	243	3,118	65,260	17,506	...	26,159	684	...	6,890	...	455	630	16,325	157	...	114	1,041	1,964	997	6,260	2,240	341,297

is compiled by the Robinson's Advertising Service, of Springfield; and New Jersey, which is town and county lists of owners in any section may address any of these three companies.

SPICER PERFECTS OIL SEAL FOR UNIVERSALS



THE LUBRICANT SEAL NOW EMBODIED IN ALL SPICER TRUCK AND BUS UNIVERSAL JOINTS CONSISTS OF A CUP-SHAPED BAFFLE DISK (A) THE EDGE (B) OF WHICH CONTACTS INNER SURFACE OF MAIN CASING (C) AND WIPES BACK LUBRICANT WHICH OTHERWISE WOULD ESCAPE. CONTACT IS MAINTAINED BY LIGHT SPRING (D). VENT (F) SERVES AS RELIEF VALVE TO PREVENT OVER-FILLING BY HIGH PRESSURE LUBRICATORS

Interchangeable With Former Truck Models

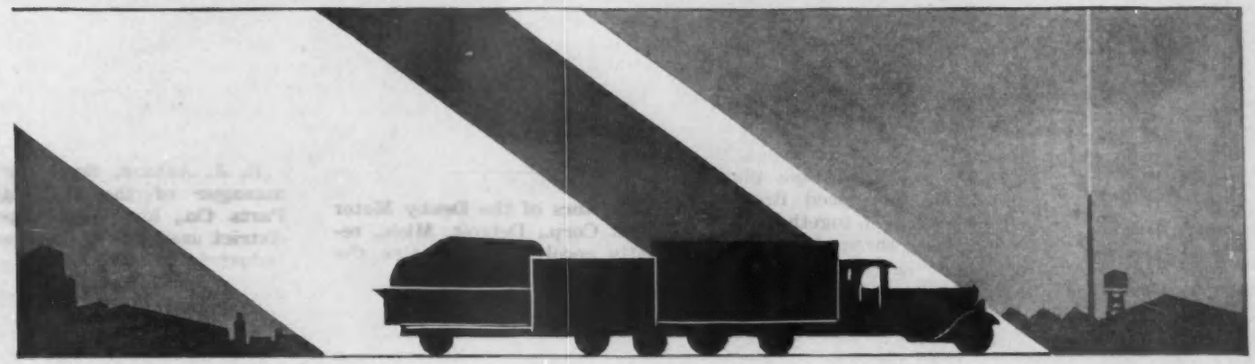
AFTER several years of exhaustive research and experimentation the Spicer Manuafacturing Corp., Toledo, Ohio, has perfected a lubricant seal, which is now offered in production on truck and bus sizes of joints, namely, the 400, 500 and 600 sizes. The seal is positive in its operation, regardless of the amount of lubricant used. Joints incorporating the seal are designated as Type I.G.

The lubricant seal is a molded Bakelite and fabric cup or disk, which prevents lubricant from penetrating the space between the inner and outer casings. The outer edge of this disk, which contacts the inner wall of the inner casing, not only functions as an oil seal at all times, but during universal action of the joint serves to wipe the lubricant back into the chamber.

While centrifugal force aids in maintaining contact between the disk edge and the inner wall, light pressure exerted by a spring circling the inside flange of the disk is sufficient to maintain this contact when the joint is at rest.

To guard against possible damage to the lubricant seal as well as to the inner and outer casings in the event too much lubricant is injected by high pressure apparatus, a vent is provided through the center of the shaft to permit escape of excess lubricant and at the same time prevent drainage in operation. This vent also indicates when the joint is full by overflow.

The fundamental design of the joint remains unchanged, the assembly, as a whole, being interchangeable with the former standard. Bushings, journal crosses and flange yokes are without change of any kind. Lubricant is injected through channels in the yoke and stub ends as formerly.



TRUCK INDUSTRY NEWS

GENERAL

Chairman Frank McManamy of the Interstate Commerce Commission expresed the opinion that trucks and buses help the railroad so far as net profits are concerned by taking care of short haul traffic which is not profitable to the railroad owing to the two-terminal services. He said in taking away a great deal of short haul freight traffic, the trucks have left the railroad more profitable long haul traffic. These opinions were recently expressed before a sub-committee of the House Committee on Appropriation.

WM. ROBERT WILSON, THE NEW GENERAL MANAGER AND DIRECTOR OF THE REO MOTOR CAR CO.

The United States Circuit Court of Appeals in New York City has ordered an injunction prohibiting the sales of solid carbon dioxide for use in a manner covered by a patent controlled by the DryIce Corporation of America. The DryIce Co. now owns and operates 27 plants and warehouses from coast to coast, representing an investment of $5,000,000, and its product DryIce is having a rapidly growing use in the transportation of meat, produce, fruit and other perishable food products.

The Truck Industry

January truck production in the U. S. and Canada as reported by the Department of Commerce was 39,522.

January truck sales in the U. S., according to partial returns, ran about 5 per cent ahead of January, 1929, when sales totaled 29,375.

Reports of increases in construction contracts may serve as an indication that February sales will compare favorably with the 32,565 total of February, 1929.

January export figures were not available at the time of going to press.

Trucks of 1 to 1½-ton capacity have been reclassified by the National Association of Casualty and Surety Underwriters and now carry the rates for the light truck rather than for the intermediate truck as heretofore, thus resulting in lower rates for these trucks. The light truck classification previously included only trucks up to one ton.

Tests are being conducted by the Canadian Department of National Defense of a six-wheel truck developed by the British War Office. It is designed to have the climbing ability of a tank and the speed of an ordinary four-wheel truck.

FACTORY

Bendix Aviation Corp. has purchased the Bragg-Kliesrath Corp., makers of vacuum spring boosters. Manufacture, sale and service of Bragg-Kliesrath will be continued at Long Island City with the present personnel. Large production orders will be manufactured at the Bendix Brake plant at South Bend, Ind.

A. W. CHILDS, NEW CHIEF OF THE AUTOMOTIVE DIVISION, BUREAU OF FOREIGN AND DOMESTIC COMMERCE.

Stockholders of the Miller Rubber Co. voted to approve the purchaser offer by the B. F. Goodrich Co. for the assets of the Miller Co. The Goodrich firm plans to assume the liabilities of Miller.

Sterling trucks registered in California in 1930, exceeded the previous year by 29 per cent, according to W. B. Hambly, vice-president and general manager of the Sterling Motor Truck Co. of California.

TRUCK INDUSTRY NEWS

Included in the 1930 line of the Moreland Motor Truck Co. of California is a new 5½ ton job, designated as Model E-7 and listed at $5,285. This 196 in. wheelbase unit, furnished with 30 x 18 pneumatic tires, is powered by a six-cylinder 4⅛ x 4½ in. Hercules engine mounted in unit with a Brown-Lipe plate clutch and four-speed Brown-Lipe transmission, together with a Brown-Lipe three-speed auxiliary transmission. The braking system is composed of mechanically operated four-wheel brakes amplified by a vacuum booster and an emergency brake on the driveshaft.

THOMAS J. LITLE, JR., THE NEW ENGINEERING DIRECTOR OF THE HOLLEY CARBURETOR CO.

Model A-1 is the designation of a new 132 in. wheelbase, one-ton six announced by the La-France-Republic Corp. This new unit, listed at $990, is equipped with a 2⅞ x 4¾ in. Lycoming engine, four-speed Fuller clutch mounted in unit with a Borg & Beck clutch, and a full-floating spiral bevel drive Timken rear axle.

General Motors Corp. reports earnings for year ending Dec. 31, 1929, of $248,282,268, which compares with $276,468,108 for the corresponding period of 1928.

Borg-Warner Corp. report net income for year ending Dec. 31, 1929, of $7,650,000 after depreciation, taxes, etc. This compares with $4,610,831 in 1928.

A new branch has been established by the Sterling Motor Truck Corp. at 185 Washington Ave., Boston. This is not a change of headquarters of the Boston branch as erroneously stated last month, but the establishment of a new unit.

Directors of the Denby Motor Truck Corp., Detroit, Mich., recently resolved to dissolve the corporation.

International Harvester Co. plans factory branch and distributing plant at Scranton, Pa., to cost $50,000 with equipment.

PERSONAL

M. D. Tracy, formerly sales manager for the White Co., has been appointed general sales manager of the Headley Emulsified Products Co., manufacturers of emulsified asphalts.

A. M. Welch has been named vice-president and general manager of the Federal Motor Truck Co. of New York, Inc. Mr. Welch was formerly New York assistant general manager for the Reo Motor Car Co.

E. D. Sirrine has been appointed to the position of transportation engineer of the Autocar Company, according to H. M. Coale, vice-president in charge of sales.

John Cleary, formerly editor of *Motor Age*, has been appointed sales promotion manager of the *Philadelphia Record*.

Gordon Johnson has been appointed director of sales and A. F. Jordan has been advanced to sales managership of the United States Air Compressor Co.

D. L. Peck, formerly sales engineer of Fruehauf Trailer Co., is vice-president of the newly formed Express Transportation Co., organized to provide motor express service between Detroit and Chicago.

E. J. Ashton, formerly sales manager of the Bearing and Parts Co., has been appointed district manager for Aluminum Industries, Inc.

L. F. Ross has resigned as aviation editor of the *News* of Cleveland to become director of public relations of the Cleveland Pneumatic Tool Co.

C. W. McKinley has been appointed chief engineer of the experimental engineering department of the AC Spark Plug Co.

C. M. WILLS, NEWLY APPOINTED SALES MANAGER OF HILAB PRODUCTS CO., INDIANAPOLIS, IND.

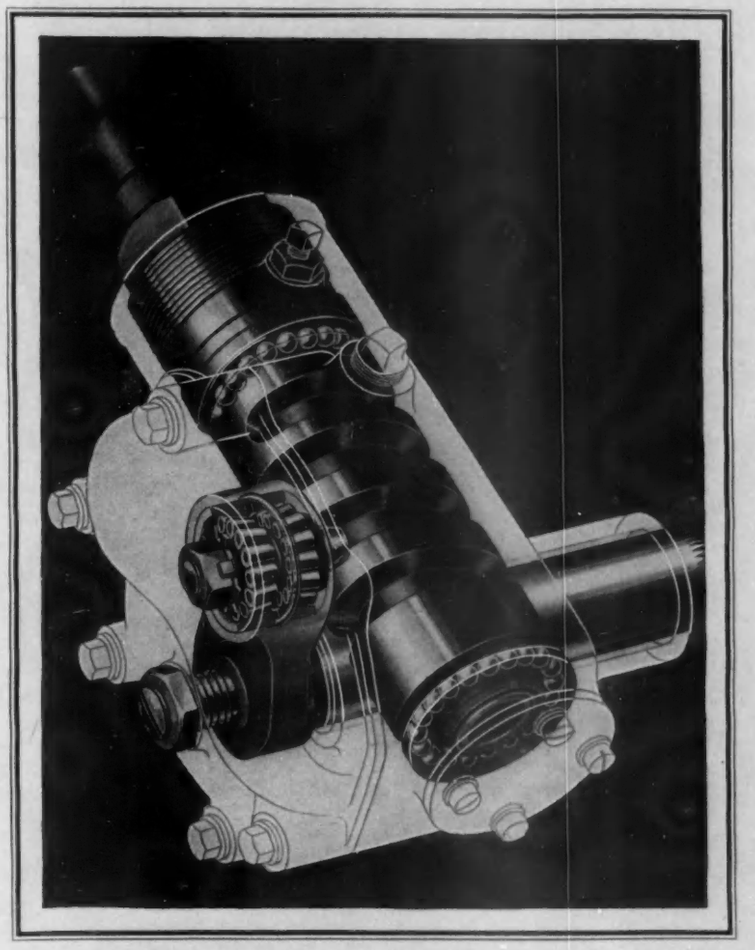
The United States Rubber Co. has elected Chas. H. Sabin and David Dwight Douglas as members of its board of directors.

ASSOCIATIONS

Filing two law suits against ship lines for delay in loading trucks on behalf of two of its members, T. F. Barry, executive secretary of the Merchant Truckmen's Bureau of New York, stated that a favorable verdict would result either in innumerable suits against steamship lines or a great improvement in service for loading and unloading trucks at the piers.

Ten papers pertaining to changing delivery conditions will be delivered during a four-day convention of the Retail Delivery Association at Cleveland on March 18-21. Among the papers will be: "Construction and Design of Motor Truck Bodies for Retail Delivery"; "Ideal Painting Processes for Delivery Trucks," and "Design and Operating of Modern Service Building."

The Same Balanced Steering —but 50% EASIER...



The cam-and-lever principle on which the Ross "Roller-Mounted" Gear is constructed is shown above. Note the unusual length of the internal lever arm, and the fact that the only contact between the actuating and actuated members of the gear is the rolling line-contact between the lever-stud and the cam thread.

Ross *Cam and Lever*
Steering has always been known for its perfect balance—the fact that it combined the utmost in ease of wheel-turn, road-sense and control of road-shock.

Now, the new "roller-mounted" type of Ross Cam and Lever Steering Gear brings a further increase of 50 percent in *steering ease*, by reducing friction between actuating and actuated members, and with it, a greater degree of road-sense. Balance is an inherent characteristic of cam-and-lever construction—and only Ross makes the Cam and Lever Steering Gear. Write for complete information on this remarkable improvement in steering.

ROSS GEAR *and* TOOL CO.
Lafayette, Indiana

ROSS Cam AND Lever **STEERING**
"Roller-Mounted"

ALUMINUM WINS OVER OPERATORS

CONTINUED FROM PAGE 29

FIG. 6—THIS 15-UNIT FLEET OF THE COLONIAL BAKERY CO. IS EQUIPPED WITH ALUMINUM BODIES MADE BY THE MCCABE-POWERS AUTO BODY CO., ST. LOUIS. WEIGHT REDUCTION REPRESENTS A BIG SAVING IN OPERATING COSTS TO BAKERIES BECAUSE TRUCKS IN THIS SERVICE ARE ON THE ROAD MANY HOURS IN THE DAY

FIG. 7—WHILE THE MAIN STRUCTURE OF THIS ARMORED JOB, BUILT BY THE GUSTAVE SCHAEFER WAGON CO., CLEVELAND, IS OF WOOD, THE PANELING IS OF ALUMINUM. IT WAS USED TO OBTAIN BETTER FINISH AND BECAUSE IT IS CHEAPER THAN PLYWOOD

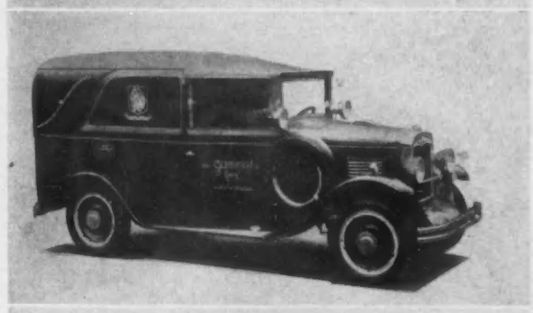


FIG. 8—ANOTHER EXAMPLE OF THE DECORATIVE EFFECT OBTAINED BY THE USE OF ALUMINUM FOR PANELING. THIS DE LUXE DELIVERY WAS MADE FOR THE GAMMEL FUR CO., CLEVELAND, BY THE GUSTAVE SCHAEFER WAGON CO., CLEVELAND

FIG. 9—PANELS AND MOLDINGS OF THIS VAN, BUILT FOR THE LAMMERT FURNITURE CO., ST. LOUIS, BY THE MCCABE-POWERS AUTO BODY CO., ST. LOUIS, ARE OF ALUMINUM, WHILE THE UNDER STRUCTURE IS OF WOOD. IT IS 16 FT. LONG, 7 FT. WIDE AND 7 FT. HIGH AND 1000 LB. LIGHTER THAN AN ALL-WOOD BODY

FIG. 10—THIS VAN, BUILT BY THE HEIMBURGER BODY CO., ST. LOUIS, WAS DESIGNED TO SAVE WEIGHT AND SECURE ATTRACTIVE FINISH. IT HAS A LOAD CAPACITY OF 980 CU. FT. AND IS CAPABLE OF CARRYING A PAYLOAD OF 11,000 LB. SIMILAR VANS BUILT IN STEEL HAVE A PAYLOAD CAPACITY OF 7000 LB. ONLY PANELS AND MOLDINGS ARE OF ALUMINUM

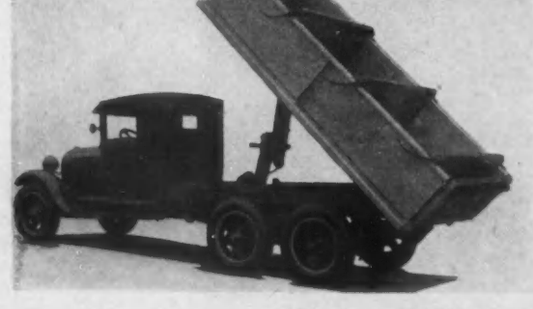


FIG. 11—COMBINING THE STRENGTH OF MILD STEEL AND LIGHTNESS OF ALUMINUM, THIS BODY, DESIGNED AND BUILT BY THE AUTO TRUCK EQUIPMENT CO., PITTSBURGH, WEIGHS 650 LB. OR 1150 LB. LESS THAN THE WEIGHT OF A SIMILAR BODY IN STEEL. ALL UNDER STRUCTURE MEMBERS ARE 3-IN. ALUMINUM ALLOY CHANNELS. IT IS 132 IN. LONG, 60 IN. WIDE AND 24 IN. HIGH

8000 lb., hauling such loads as aluminum scrap, castings, structural shapes, coal and ashes. Materials dumped into the body frequently submitted it to 3000-lb. jolts. Results of the test revealed that both the aluminum and steel have sagged somewhat between the cross-sills, the aluminum about $\frac{5}{8}$ to $\frac{3}{4}$ of an inch, and the steel $\frac{1}{2}$ an inch, but that the aluminum and steel floor showed no appreciable difference in wear because of abrasion. Underframe members were in first-class condition and showed no evidence of deterioration nor any sign of corrosion. It is believed that the body stood up well and that it is in no worse condition than a steel body would be under similar conditions.

High first cost, the second factor, is offset by operating advantages, concerning which there is more information than formerly. Experience has shown that the return on the added investment necessary for aluminum-built bodies more than compensates for the extra initial expense. Actual examples of the operating economy of aluminum bodies, wherein the first cost has been quickly absorbed, are available from most any organization where records are kept. The story is invariably the same. Operating figures presented in the box on page 28, developed by Nielsen Surveys, cover three fleets engaged in as many different lines of business. These fleets show returns ranging from 75 to 117 per cent on cost of extra equipment required. The table is self-explanatory, and a careful study of the truck operating data and costs of these three fleets will show how this was accomplished.

TURN TO PAGE 54, PLEASE

HOW OFTEN do you have to *Adjust Brakes?*

10 *points of* FERODO Superiority

1. High Average Wear-Life
2. Constant Gripping Power (*coefficient of friction*) to over 550° F.
3. Safe Brakes *in* Wet Weather
4. Will Not Burn Out
5. Fewer Adjustments
6. No Swelling *or* Shrinkage
7. Size Accuracy—*within tolerance of .005 inch*
8. No Glazing
9. Silent, Smooth Operation
10. Cheaper Per Mile *of* Service

• • •

These are not claims but facts—proved in laboratories known to be the best equipped for practical tests on brakes

Brake adjustments are expensive. They cut down the working time of your trucks, they run up shop costs. And if, in a rush of business, you are forced to neglect them, brake failure may result at a critical moment.

There is a simple way to avoid much of this "grief"—the use of Ferodo Brake Linings. These Linings are so unusually tough and durable that they wear down very slowly . . . even on heavily-loaded, fast-moving trucks.

Hence, they require fewer adjustments and provide a greater assurance of safe, dependable brakes at all times.

Furthermore, when you do have to reline, you will again find that Ferodo Brake Linings cut shop time. They are always accurate to size—as close as *.005 inch*—which means a quick, correct fit, particularly necessary with close tolerance modern brakes.

FERODO AND ASBESTOS INCORPORATED

Manufacturers of Ferodo Bonded Asbestos Brake Lining in rolls, Ferodo Pat. Die-Pressed Brake Segments, and Ferodo M-R Lining.

Factory and General Offices: **New Brunswick, New Jersey**

FERODO REGISTERED BRAKE LININGS

E—3-30

SALESMEN CAN DO CRIME PREVENTION ENGINEERING

CONTINUED FROM PAGE 16

getfulness or lack of specified caution at all times spells the rapid end of a now unimportant life which is good for only about three years anyhow. He is given enough of the dope to keep him going while the study period lasts, and finally is given a job. He is told to be at a given point at exactly a specified time by a specified clock—not his own. He is told how to approach, let's say, a silk truck and put his left foot first on the step of the cab, point his gun at the driver, and order the driver and helper, if any, into a sedan on his immediate left, at that immediate time. And the sedan is there, every time, on time, ready for action. The boy, still following instructions, or a substitute made available as part of the gang, hops into the cab and drives the loaded truck into an open field at a given destination. His job is then ended and he leaves the field of operations for another member of the gang who, after disabling the original truck, transfers the load to a different truck. The original crew are kidnapped for the time being and held for one to two days so they will not be in the way. The transferred load is delivered to the "fence." All members of the gang are carefully instructed to stay off the job for a day or two, returning to conference and the "divvy" at a fixed day and hour.

The insurance company covering the risk pays for the stolen load, which sometimes amounts to $150,000. Many loads of this size move daily in interstate traffic through Pennsylvania, New Jersey and New York. The same is true, in lesser values, of cigarettes, rubber latex, and many kinds of valuable freight.

Look back again into the schoolyard. Shall our ambition be to wipe out, by wholesale slaughter, if necessary, these innocent kids who have been ushered into a life of crime by the dereliction of a smug society, or shall we consider it our duty to make it impossible to use such material in highway holdups? If they can't be used there will be no such recruiting in the future.

That's where the armored car comes in. I do not mean the cumbersome, fort-like abortions which seem to pose as an open dare to the gunman whose slogan "never take a chance" is almost dared out of his book of rules for the time being. Such loads can be protected by an innocent-looking, invisibly armored cab or truck body which the gunman, through organized crime observation, knows to be a tricky proposition that is best left alone while there are easier jobs to do. Let the payroll crew at a mine, or on a construction gang, road builders, quarries, many such situations, use an invisibly armored payroll truck. Let the payoff be made from inside the car, thus frustrating any attempt at payroll robbery before it is attempted. This kind of crime prevention actually prevents. The other kind dares the gunman who has nothing to lose and everything in his favor for a successful getaway. Let country and city banks use the armored car. Particularly in the country it is quite general practice for a bank to call and collect deposits, and deliver payrolls. Here's one of the greatest temptations for the gunman we know of. It calls for crime prevention methods. Laws, however stringent, have failed to perform. These stringent laws have only increased the incentive to kill, rather than risk identification. Isn't that obvious?

Now the next step in crime prevention engineering in this field is to apply these accepted and proved meritorious methods in the thousand and one fields where the demand exists. Each truck dealer and salesman, in fact, should be able to supply the data which would make the invisible type of armored body an understood and clearly visualized actuality to the banker or paymaster, or other prospect.

The illustration herewith shows the latest type of bank car. Into this, on one side, or in the rear, an opening for payroll service can be simply provided. The payoff tray has a false bottom, a double bottom in fact. When a shot is fired at the tray it penetrates to the bullet-proof metal base where it can do no harm. The bullet stays where it lands. There is no possibility of the bullet entering the car or splashing back and injuring one of the laborers. Likewise there is no chance of it caroming into the paymaster's compartment.

We are now facing disbursement of a five-billion-dollar "Hoover boom fund." How much of this could conscientiously be spent for crime prevention equipment? How many truck dealers and salesmen are prepared to receive their share of this business?

Business is now on its toes to make up for the big loss of capital due to lack of constructive effort during 1928 and 1929 or the period when the alluring ticker made it difficult for human beings to feel satisfied with anything so prosaic as ordinary business. Let's, while we are at, give this crime army a little competition. Let's at least make the matter interesting. Clerks, boys and girls carrying large sums of money through the streets for unthinking employers risk their lives every trip. Let the invisibly armored money truck eliminate that incentive to additional killings.

There is a further reason why, properly presented, this suggestion will take. Some two years ago I approached a large cigarette and tobacco manufacturer who had had several recent losses through holdups as herein described. He felt sold on the idea of the value of this type of protection and ordered three jobs. Then he told me he was doing so because his insurance policy had been cancelled by the company "on the risk," and he needed protection. I asked him to telephone the underwriter for the insurance company and state simply that he had ordered this equipment. Like a flash the answer came back from the underwriter: "All right Mr. ————, your policy is in force again right now, and the new premium is very materially less than it used to be."

Big cash dividends are insured where the risk is lessened, if not entirely eliminated, by protective measures of this type.

ALUMINUM WINS OVER OPERATORS

C NTINUED FROM PAGE 52

Evidence of the passing out of the picture of the third negative factor, lack of knowledge of the use of aluminum on the part of the body makers, is indicated by the accompanying illustrations showing jobs made by quite a number of different concerns. The number of body builders familiar with aluminum last year could easily be counted on the fingers of one hand. Today the majority of the larger concerns have had some contact with the material, and are inquiring and learning more and more about it.

Two of the most significant developments of the year were extension of aluminum alloy to the de luxe delivery and armored service fields. Most jobs in these classifications are of wood and metal combination type, in which aluminum is used chiefly for paneling or sheathing. While light weight is a factor, the main purpose for use of aluminum paneling is to obtain attractiveness and beautiful finishes. Aluminum combines two desirable characteristics essential to this end: resistance to corrosion and freedom from wrinkles and buckles. Aluminum offers the same flatness of surface as more expensive air-dried wood and is

TURN TO PAGE 60, PLEASE

65*

truck manufacturers and their thousands of dealers will tell you (in the emphatic and downright terminology which properly accompanies their enthusiasm) that it IS easier to sell a truck when it is equipped with LOCKHEED HYDRAULIC FOUR WHEEL BRAKES

HYDRAULIC BRAKE COMPANY
DETROIT, MICHIGAN, U. S. A.

***This represents a 133 per cent increase in one year.**

SELL THE PUBLIC ON MOTOR TRUCKS

CONTINUED FROM PAGE 26

part of the job. Raw material must be carried from the farm, the forest and the mine to the mill. It must be carried from the mill to the rail. It must be transported from the rail to the finishing plant—back to the rail—from the rail to the warehouse or wholesaler—from the wholesaler to the rail —from the rail to the retailer—and finally from the retailer to you. And that number of handlings, probably in the majority of cases, is greatly increased because of warehousing due to hand-to-mouth buying and other ramifications in the transporting of goods before they reach the ultimate consumer. In the price of a very great number of articles that the public buys and uses, the cost of distribution alone exceeds the amount paid to the manufacturer or producer for the article. When the public appreciates that fact and appreciates that the motor truck is engaged in keeping down the price of articles it buys by keeping down the cost of distributing such articles, then the public will have a new conception of the motor truck as a distributing utility directly affecting its cost of living.

Retail distribution uses more capital than any of the other divisions of business. It employs more people. Distribution costs have continued to rise from year to year, but only when these rising costs began to back up through all the channels of commerce and industry, giving rise to the condition now largely described as "profitless prosperity," did it become apparent that every industry, every job, and for that matter every profession, is dependent on a sound and profitable system of distribution.

Perhaps the following facts will paint even a clearer picture. Fourteen million head of livestock were hauled to market in motor trucks last year. Six million legs of lamb or mutton, and eighteen million hams hauled by motor truck last year means that lamb and mutton was trucked for every 20 families, and a ham was brought to market by truck for every six persons in this country. Consider in this connection that if truck service were curtailed within a radius of 80 miles around our large cities, the lack of milk, vegetables, and some meat supplies would be a serious calamity and the dependence of the larder on the motor truck is appreciated. Famines in this country, due to the failure of transportation facilities, are a calamity of the past, for the motor truck today can go practically any place in this country on improved highways. Word-paint that picture in the public mind by showing how the motor truck serves it and saves it money in the price of things it buys, and the public will accept the motor truck for what it really is—the answer to today's distribution problem.

The other step necessary to accomplish a favorable change of public opinion must be taken by the representative of the operator who comes in contact with the public—the truck driver. He is either the operator's emissary of good will or bad feeling. He must be taught to understand that he is not the king of the highway because of the size of his vehicle. He is only one member of the public using a public way in which every other member of the public owns an equal share and has an equal right to use in comfort and safety. The truck driver starts out like a minister's son, under suspicion, and he must overdo his smile and go out of his way to be courteous in his effort to reinstate his owner's business in the public's opinion. It is a fact that truck drivers as a class are careful and courteous, but the entire class of truck drivers is condemned because of the shortsightedness, carelessness and rudeness of a comparatively small percentage of drivers. These drivers must be educated to the responsibilities of their position or they must be discharged. The operator cannot jeopardize his investment in his business by retaining such drivers in his employ. The damage such drivers do to their employer's business is far greater than is immediately apparent. It is translated into added restrictions imposed by the state law; it results in increased taxes by legislatures looking for some object to tax that is not too popular with the public, and it results in drastic operating regulations imposed and enforced by public utility commissions trying to satisfy public demands.

Public opinion can be converted to an entirely different conception of the motor truck. Driver education is the first requirement. One of the most successful methods of getting driver cooperation in establishing favorable public opinion is in regularly conducted safety campaigns. Safety campaigns pay cash dividends to the operator in reducing accidents, liability and property damage claims, damage to the company's property and in reduced insurance costs. Rewards should be substantial to drivers who have no accidents, who drive carefully and against whom no complaints are made by other users of the highways. The public should be requested to report drivers who do not drive carefully, who do not drive on the right side of the pavement, who do not carry warning flags on overhanging loads, who do not get over when they hear a horn of a motorist who desires to pass, and who are not courteous and gentlemanly in their contact with the public. In such campaigns the cooperation of law enforcement bodies and newspapers should be solicited. Public officials and law enforcement officers should be requested to address the drivers at their safety meetings. It is not a new idea. It has been extensively tried and it works.

DESIGN CHANGES CHANGE SERVICE

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a change little short of revolutionary, within the past few years. Brakes on front wheels brought about need of adjusting or equalizing to produce the required amount of braking on front and rear wheels. Internal brakes with rigid shoes and clearances measured in thousandths require fine adjustment. Vacuum amplifiers and hydraulic operation entered the scene and brought with them new service methods.

Skipping now to the engine group we find changes in almost all of the operations. A few years ago replacing main bearings called for removing an engine from the chassis and tearing it to pieces. With interchangeable type bearings the job can be done in a few hours without disturbing the engine.

Replacing oil filters or their cartridges and cleaning air cleaners are but two of many new operations brought about by newer designs. Maintenance of electrical equipment opens up a whole new field for service. Batteries, starters and generators were by no means common a few years ago.

Better performance is expected of up-to-date trucks and this includes not only more power but more quiet operation of engines. Tappets are adjusted for quietness as well as to prevent burning. With high compression engines spark timing is very important and must be set according to instructions rather than by observation of "spark" knocks.

A successful dealer was very much surprised to learn, from his service

TURN TO PAGE 58, PLEASE

SELL MORE TRANSPORTATION

LAPEER

Fully Automatic Trailer

Today anyone who is buying hauling equipment is after as much transportation for his investment as he can get. With a LAPEER FULLY AUTOMATIC TRAILER you can sell him greater capacity with the same motive power or, what is more likely to interest him, the same capacity with less motive power. To get these "more transportation buyers" you should have complete data on the LAPEER FULLY AUTOMATIC SEMI-TRAILER.

Write for the facts.

LAPEER TRAILER CORPORATION

LAPEER, MICHIGAN

U.S.A.

Oldest and Largest Manufacturers of Automatic Semi-Trailers

1,000 cubic feet is the capacity of this van body in the service of Douglas Warehouse Co. of New Orleans, La., Allied Van agent in that city.

GIVING SATISFACTORY SERVICE TO AN ARMY OF USERS

LOAD SPACE UNIFORMITY URGED FOR INDUSTRY

CONTINUED FROM PAGE 17

manufacturer, with the exception of Ford and Chevrolet, has a sufficient volume of any one model in any one part of the country to warrant any body builder attempting to build up any one type of body meeting vocational requirements.

From the operators' standpoint, this lack of uniformity in load-space dimensions also presents a very serious problem. It is not unusual for a truck body to outlast two or three truck chassis, as in the case of special designed bodies or tank installations. In changing the body from the old chassis to a new one, the operator may find that the wheelhousing does not fit, and the load distribution may be entirely wrong. This not only hap pens if another make of chassis is used, but actually an operator may purchase the same make of truck of the same wheelbase as the old chassis and find that, due to dimensions being changed in the location of cowl and the length of cab, the load space may vary considerably from the dimensions of the old chassis.

What has been said about load-space dimensions from cab to center line of rear axle also applies to width of frame. Body manufacturers and operators are facing the same problem when attempting to build new bodies or transferring a body from an old truck to a new chassis. The wheelhousing may fall in the same place but, due to the frame being of a different width, relocating the body sills may be necessary.

A most careful study of this subject resulted in the working out of recommendations for standard load-spaces of chassis and body length. The entire range of practical body-length from 5 ft. to 22-ft. can be mounted on only eight standard load-space dimensions from the cab to the center line of the rear axle and this can be accomplished without running into any danger of abnormal load-distribution. This gives 25 different body-lengths without a greater size-variation than multiples of 6 in.

One of the most serious problems confronting designing engineers, truck manufacturers and operators during the past, and one which becomes more intricate every year, is the wide range of state rulings and legal restrictions concerning sizes, weights and taxation on commercial motor vehicles. During 1929, more than 2500 amendments were presented to the Legislatures of 41 states, affecting the design, manufacture and operation of trucks.

A wide variation of regulations is one of the greatest handicaps interfering with expansion of interstate transportation. A case is pending in the United States District Court in Toledo in which a long-distance operator is trying to protect an investment of $100,000 in vehicles which have been in operation for several years throughout the State of Ohio. Recently, several Ohio County officials decided to enforce a ruling to forbid vehicles longer than 30 ft. and so prevent this operator from passing through Ohio. In another case, operation of a fleet of specially built vehicles had to be discontinued in the State of Connecticut, due to a ruling reducing permissible over-all length of vehicles from 40 ft. to 33 ft.

Speed regulations in most states are antiquated in relation to improvements which have been made in safety features controlling the operation of commercial vehicles. Designing engineers are constantly searching for improvements to reduce the cost of operation and incorporate greater operating efficiency in the design, but these efforts are handicapped by impractical legal restrictions.

The Hoover Code as formulated in 1926 is one of the most constructive pieces of work which has been done to protect the interest of commercial transportation, but at that time the solid tire was still a factor and the rapid growth of pneumatic-tire applications could not be foreseen. With more pounds of payload for each pound of dead weight, made possible with modern high-speed vehicles on balloon tires, it is felt that the time has arrived for considering certain changes in the recommended weight regulations as set up in the model act.

Present regulations and restrictions on commercial vehicle weights may be practical for solid tires and possibly some highway engineers have good reasons to recommend that commercial motor vehicles weights should be reduced below the present limit to protect gravel roads in their respective states. From tests made by the Bureau of Public Roads in connection with the Society of Automotive Engineers and Rubber Association of America, conclusive evidence is available that pneumatic tires cannot cause any serious damage to well-constructed pavements. Shock on pavements is negligible with high-pressure pneumatic-tires and even less when tires are under-inflated, the condition we have in the new type of balloon tire.

Tests with six-wheel trucks show that the stresses in a concrete pavement caused by a four-wheel truck are approximately twice as great as those caused by a six-wheel truck carrying the same load.

The propaganda that has been spread in the past that motor trucks are tearing roads to pieces has caused a very unfavorable reaction against commercial motor vehicles in many quarters, and the time has arrived when our entire industry, including manufacturers and operators, are finding themselves fighting for their very existence in protecting the transportation of passengers as well as heavy tonnage of merchandise against legislation, in some cases, may be call confiscatory.

Education work proving that pneumatic tires do not injure the road, is necessary to offset results of past propaganda against commercial vehicles. After careful study of this subject, we submit a recommended scale of weight regulations in which maximum vehicle-weights have been eliminated, and gross axle-weight limitations are based on axle spacings and weights per inch of tire only. This recommended schedule is based on the classification of highways as set up in the Hoover Code, according to the carrying capacity of the pavement, taking into consideration the difference in design of commercial vehicles, difference in load distribution on truck versus trailer axles, carrying capacity of pneumatic tires and the need for uniform weight-regulations.

Design Changes Change Service

CONTINUED FROM PAGE 56

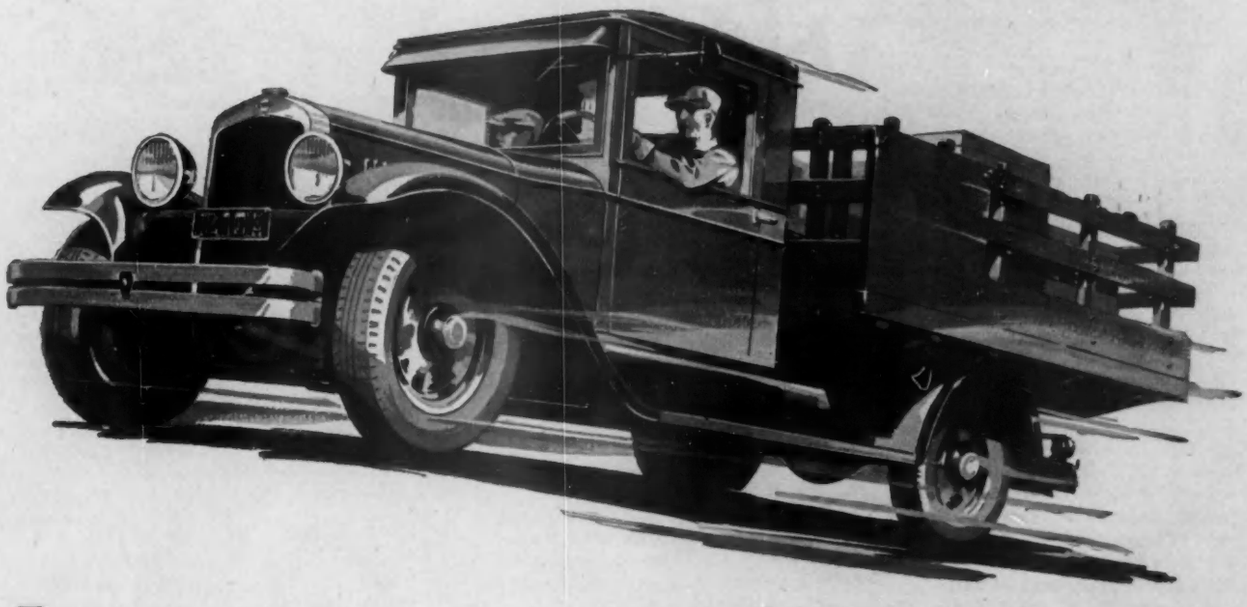
manager that cab and body repairs now make up a considerable part of his service business. Many of these jobs are small, such as taking out squeaks and rattles or touching up.

The quick service field is highly competitive. A host of establishments are ready and willing to lubricate trucks for all comers and most of them are prepared to perform other ministrations such as charging batteries, washing trucks and repairing and changing tires. Put upon a production basis and sold at flat rate prices quick service offers opportunity for profit.

A dealer who "takes the leavings" of service is apt to lose the profitable small jobs and have little besides major repairs in his shop. The evil spirit of policy adjustments haunts the big jobs, free service during guarantee eats into income and profits are whittled to an uncomfortable degree.

Within the dealer's organization and particularly within his own shop, lies the remedy for the situation. Shops may capitalize upon design changes by employing for the sale of service some of the same aggressive methods which characterize new truck sales. Trucks are sold against competition; the same rivalry makes it necessary to sell maintenance. Successful methods employed by factories and dealers to sell service will be related in the next article in this series.

PERFORMANCE THAT SAVES MONEY . . . STYLE THAT BUILDS GOODWILL



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For a truck whose appearance will favorably impress customers and prospective customers, the Fargo is likewise a profitable investment. *Chrysler-styled,* its eye-arresting smartness is sure to build goodwill for the business man whose name appears on its sides.

PRICES

FARGO ½-TON PACKET—*Chassis $595; Panel $845; Screen $845; Canopy $835; Sedan $945.*

FARGO ¾-TON CLIPPER—*Chassis $725; Panel $975; Screen $975; Canopy $965; Sedan $1075.*

FARGO 1-TON FREIGHTER—*Chassis $795. The complete line of bodies, of outstanding appearance and construction, includes panel, stake, canopy, express and platform.*

All prices f. o. b. factory. Fargo dealers extend the convenience of time payments.

FARGO

CHRYSLER MOTORS PRODUCT

LOAD SPACE UNIFORMITY URGED FOR INDUSTRY

CONTINUED FROM PAGE 17

manufacturer, with the exception of Ford and Chevrolet, has a sufficient volume of any one model in any one part of the country to warrant any body builder attempting to build up any one type of body meeting vocational requirements.

From the operators' standpoint, this lack of uniformity in load-space dimensions also presents a very serious problem. It is not unusual for a truck body to outlast two or three truck chassis, as in the case of special designed bodies or tank installations. In changing the body from the old chassis to a new one, the operator may find that the wheelhousing does not fit, and the load distribution may be entirely wrong. This not only hap pens if another make of chassis is used, but actually an operator may purchase the same make of truck of the same wheelbase as the old chassis and find that, due to dimensions being changed in the location of cowl and the length of cab, the load space may vary considerably from the dimensions of the old chassis.

What has been said about load-space dimensions from cab to center line of rear axle also applies to width of frame. Body manufacturers and operators are facing the same problem when attempting to build new bodies or transferring a body from an old truck to a new chassis. The wheelhousing may fall in the same place but, due to the frame being of a different width, relocating the body sills may be necessary.

A most careful study of this subject resulted in the working out of recommendations for standard load-spaces of chassis and body length. The entire range of practical body-length from 5 ft. to 22-ft. can be mounted on only eight standard load-space dimensions from the cab to the center line of the rear axle and this can be accomplished without running into any danger of abnormal load-distribution. This gives 25 different body-lengths without a greater size-variation than multiples of 6 in.

One of the most serious problems confronting designing engineers, truck manufacturers and operators during the past, and one which becomes more intricate every year, is the wide range of state rulings and legal restrictions concerning sizes, weights and taxation on commercial motor vehicles. During 1929, more than 2500 amendments were presented to the Legislatures of 41 states, affecting the design, manufacture and operation of trucks.

A wide variation of regulations is one of the greatest handicaps interfering with expansion of interstate transportation. A case is pending in the United States District Court in Toledo in which a long-distance operator is trying to protect an investment of $100,000 in vehicles which have been in operation for several years throughout the State of Ohio. Recently, several Ohio County officials decided to enforce a ruling to forbid vehicles longer than 30 ft. and so prevent this operator from passing through Ohio. In another case, operation of a fleet of specially built vehicles had to be discontinued in the State of Connecticut, due to a ruling reducing permissible over-all length of vehicles from 40 ft. to 33 ft.

Speed regulations in most states are antiquated in relation to improvements which have been made in safety features controlling the operation of commercial vehicles. Designing engineers are constantly searching for improvements to reduce the cost of operation and incorporate greater operating efficiency in the design, but these efforts are handicapped by impractical legal restrictions.

The Hoover Code as formulated in 1926 is one of the most constructive pieces of work which has been done to protect the interest of commercial transportation, but at that time the solid tire was still a factor and the rapid growth of pneumatic-tire applications could not be foreseen. With more pounds of payload for each pound of dead weight, made possible with modern high-speed vehicles on balloon tires, it is felt that the time has arrived for considering certain changes in the recommended weight regulations as set up in the model act.

Present regulations and restrictions on commercial vehicle weights may be practical for solid tires and possibly some highway engineers have good reasons to recommend that commercial motor vehicles weights should be reduced below the present limit to protect gravel roads in their respective states. From tests made by the Bureau of Public Roads in connection with the Society of Automotive Engineers and Rubber Association of America, conclusive evidence is available that pneumatic tires cannot cause any serious damage to well-constructed pavements. Shock on pavements is negligible with high-pressure pneumatic-tires and even less when tires are under-inflated, the condition we have in the new type of balloon tire.

Tests with six-wheel trucks show that the stresses in a concrete pavement caused by a four-wheel truck are approximately twice as great as those caused by a six-wheel truck carrying the same load.

The propaganda that has been spread in the past that motor trucks are tearing roads to pieces has caused a very unfavorable reaction against commercial motor vehicles in many quarters, and the time has arrived when our entire industry, including manufacturers and operators, are finding themselves fighting for their very existence in protecting the transportation of passengers as well as heavy tonnage of merchandise against legislation, in some cases, may be call confiscatory.

Education work proving that pneumatic tires do not injure the road, is necessary to offset results of past propaganda against commercial vehicles. After careful study of this subject, we submit a recommended scale of weight regulations in which maximum vehicle-weights have been eliminated, and gross axle-weight limitations are based on axle spacings and weights per inch of tire only. This recommended schedule is based on the classification of highways as set up in the Hoover Code, according to the carrying capacity of the pavement, taking into consideration the difference in design of commercial vehicles, difference in load distribution on truck versus trailer axles, carrying capacity of pneumatic tires and the need for uniform weight-regulations.

Design Changes Change Service

CONTINUED FROM PAGE 56

manager that cab and body repairs now make up a considerable part of his service business. Many of these jobs are small, such as taking out squeaks and rattles or touching up.

The quick service field is highly competitive. A host of establishments are ready and willing to lubricate trucks for all comers and most of them are prepared to perform other ministrations such as charging batteries, washing trucks and repairing and changing tires. Put upon a production basis and sold at flat rate prices quick service offers opportunity for profit.

A dealer who "takes the leavings" of service is apt to lose the profitable small jobs and have little besides major repairs in his shop. The evil spirit of policy adjustments haunts the big jobs, free service during guarantee eats into income and profits are whittled to an uncomfortable degree.

Within the dealer's organization and particularly within his own shop, lies the remedy for the situation. Shops may capitalize upon design changes by employing for the sale of service some of the same aggressive methods which characterize new truck sales. Trucks are sold against competition; the same rivalry makes it necessary to sell maintenance. Successful methods employed by factories and dealers to sell service will be related in the next article in this series.

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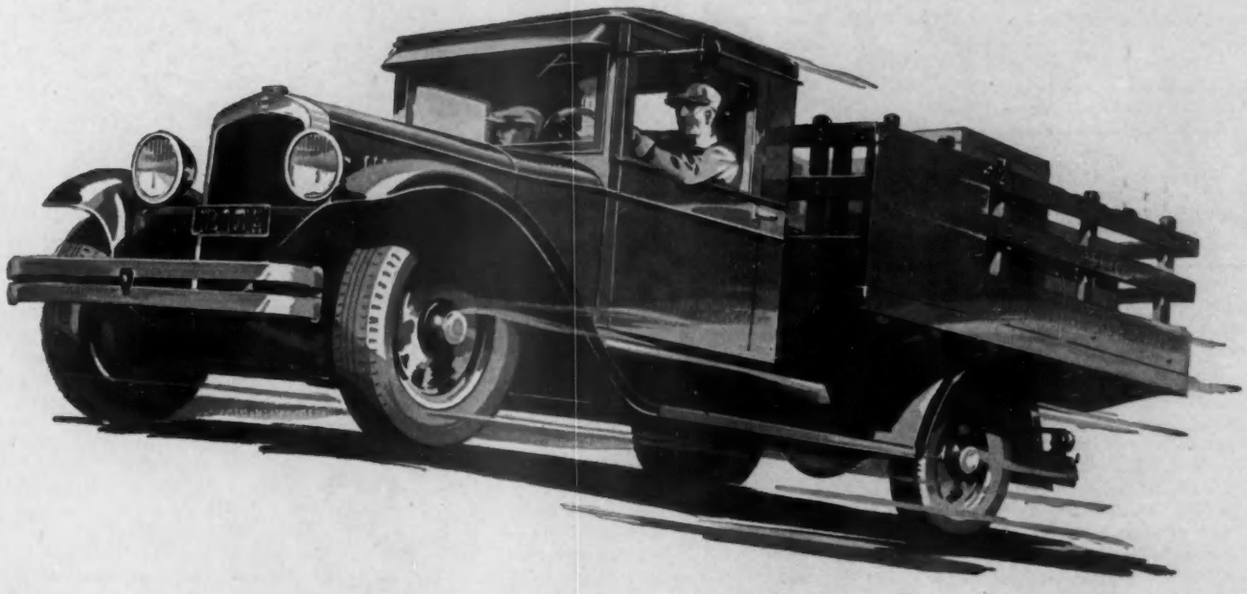

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FARGO

CHRYSLER MOTORS PRODUCT

NEW L. C. L. SERVICE MENACES TRUCKERS

CONTINUED FROM PAGE 32

advantages of container car service in such cases accrue to the forwarding companies except, of course, for the reduction in rates and, in some cases, the faster service. The forwarding companies legally occupy the position of shippers as far as their relations with the railroads are concerned, and the principal advantage of container car service to this group is the fact that containers permit the forwarding of smaller lots than carload lots.

The use of container car service is not altogether without problems and disadvantages to the railroads and shippers. A few of the outstanding disadvantages are:

1. A material increase in the initial investment of the carriers in equipment, including the cost of the containers and the specially fitted railroad cars.

2. An investment of no mean proportions by railroads and shippers using individual container service in cranes used in handling the containers.

3. The expense of rentals, per diem or demurrage charges on containers.

4. The unbalancing of loaded and empty car mileage due to the fact that ordinary box cars can be used for both carload and l.c.l. traffic, while containers and container cars can be used only for the specific traffic for which they are constructed.

5. The tendency to increase the cost of handling all l.c.l. traffic due to the lessening of the use of existing equipment, since all l.c.l. traffic cannot be handled in containers. Cars, warehouses, platforms and other facilities must still be provided to handle l.c.l. freight despite the fact that the volume of such traffic is depleted by the quantity handled in containers.

6. The shippers and consignees must assume the cost of trucking the empty and loaded containers to and from the railroad freight stations.

If the use of container car service continues and spreads, as it bids fair to do, it will have a tremendous effect upon motor freight services, particularly upon the intercity services between which the railroads and the freight forwarders can maintain regular overnight container car service, as between New York and New England, Philadelphia, Baltimore, Washington, Pittsburgh, Syracuse, Albany, Buffalo, Rochester and other points in the East, as well as between other larger shipping and receiving points in the Middle West, South, Southwest and along the Pacific Coast. If this service successfully attracts l.c.l. merchandise freight which now moves in large quantities between these points in motor trucks, the motor freight carriers may find the demand for intercity freight service materially reduced and their services required to an increasing degree in connection with traffic moving to or from smaller communities where container service is not available. A steady increase in number of points served by container cars may even further reduce effectiveness of line-haul motor service.

Of course, it goes without saying that container service requires a substantial amount of terminal motor trucking service in connection with the movement of empty and loaded containers between railroad freight stations, forwarders' platforms and the warehouses of shippers and consignees. Independent truckmen, however, have no assurance that these services will not tend to be rendered by the trucks of shippers, consignees or forwarding companies, or by agents of these groups.

If container car service is extended widely throughout the United States, it will undoubtedly tend to decrease the amount of freight transported between cities, excepting those very close together, by independent motor freight operators, and will increase the volume of railroad merchandise traffic and the amount of intra-terminal trucking, whether this business is handled by independents or others.

The testimony of witnesses representing shipping and receiving interests in many parts of the United States in the hearings before the Interstate Commerce Commission indicated that the use of container car services is taking thousands of tons of freight away from small truck operators because it is cheaper for manufacturers and merchants to ship via the container services than by railroad or by truck in many instances. Witnesses testified that they favored the extension of container car service into other parts of the country so as to establish eventually a service which might be nation-wide connecting all larger cities. Such is its logical goal.

Many motor freight carriers and the associations representing them are aware of the far-reaching effects of the container car service installations and of the portent of the spread of the services. T. F. Barry, executive secretary of the Merchant Truckmen's Bureau of New York, in commenting upon the hearings before the Interstate Commerce Commission in the container case in New York, comments pungently:

"We regret to say that we are unable to get excited about the first day's testimony, nor, for that matter, any of the testimony thus far. We appreciate, however, that it will have a far-reaching effect, when the commission makes its decision, on the truckmen of this city (New York) and throughout the country. This is because the container car operation is taking thousands of tons of freight away from the small truck operators, it being cheaper for merchants to ship via container car than in the usual manner.

"To our way of thinking, the whole container car operation looked very much like a somewhat refined effort on the part of the roads using containers to cut freight rates in a ruthless, if elegantly clever, manner." (Official Bulletin, No. 353, The Merchant Truckmen's Bureau of New York.)

In the humble opinion of the present writer, container car service presents certain indisputable sources of economy for the carriers, the forwarders and the shippers, and advantages which are real although tinctured with rate service and relationship problems which must be solved. The service is no panacea for all the ills of transportation, but a significant development of great actual and greater potential importance which must be regarded as a stimulant and not as a sleeping potion by the railroads and shippers, and especially by the motor freight carriers and other truck interests.

Aluminum Wins Over Operators

CONTINUED FROM PAGE 54

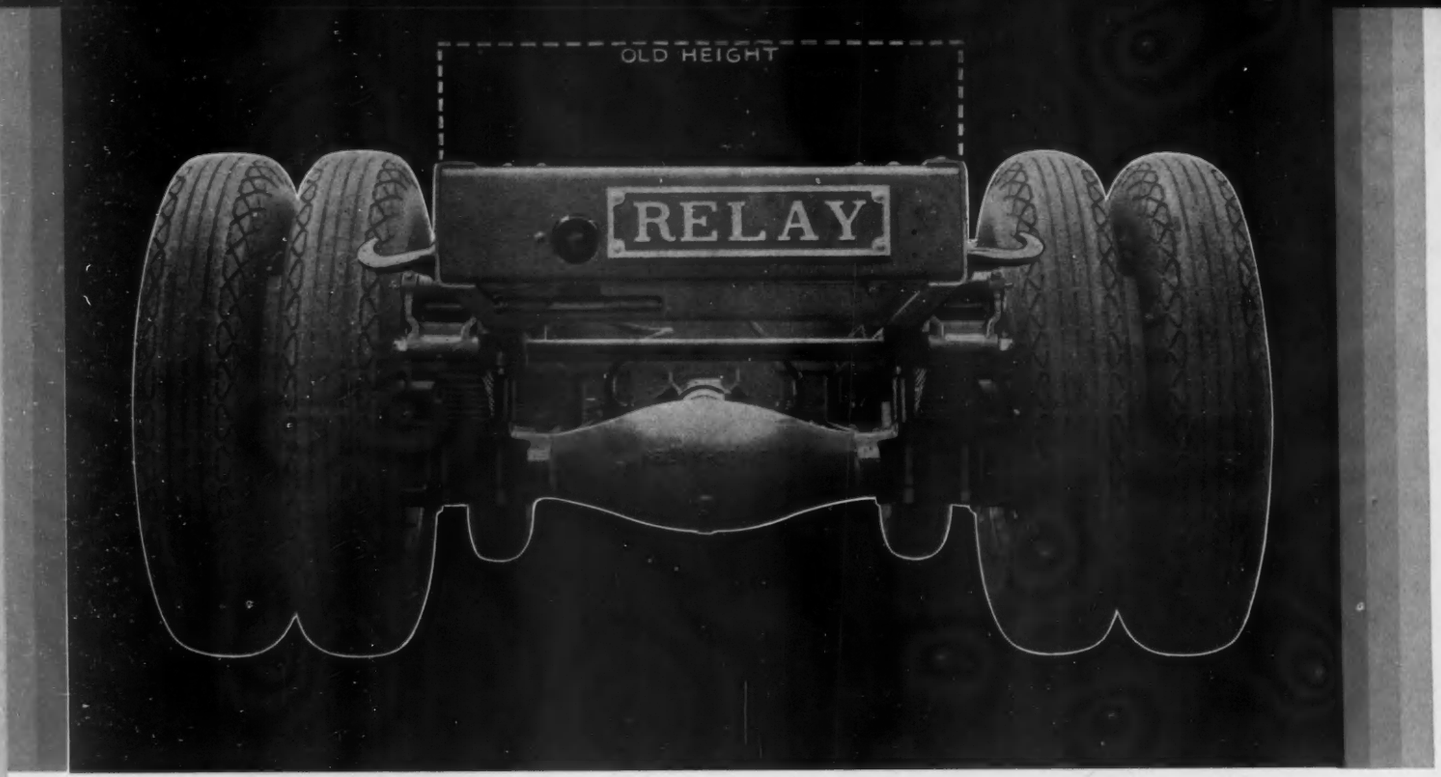
better than steel because it is without surface imperfections and because the latter is heavier and difficult to obtain absolutely flat. The biggest drawback of the application of pyroxylin lacquers on steel has been corrosion.

Sheathing armored bodies with aluminum sheets has been attempted with very satisfactory success during the past year. A job of this type was recently built by the Gustave Schaefer Wagon Co., Cleveland, for the Bank of Mexico. In this job aluminum sheets backed with steel are used, but the framework is of wood.

Bullet-proof aluminum alloy, however, is available for the construction of armored jobs built entirely of aluminum. Motor Haulage Shop and Garage Corp., Brooklyn, early last year mounted a bullet-proof cab made entirely of aluminum alloy on one of its Mack vans for the protection of their driver during the transportation of valuable and bulky cargoes. Dissatisfied with the 1000 lb. steel cabs formerly used, which were too heavy and unusually hot, the company decided to try aluminum. The cab now used weighs approximately 350 lb. less, dissipates the heat rapidly and is as secure as a steel cab. A test in which the aluminum alloy was subjected to direct fire of a revolver at three to five-foot ranges proved the sheets to be bullet-proof. In addition to natural ventilation advantage is taken of the Sirroco blower, which is standard equipment on the Mack chassis, to suck air from the cab through the radiator. The cab was built by the Mack-International Truck Corp.

THE NEW RELAY SERIES 100

Lower Height Lower Costs



New Low Chassis Cuts Loading Height 20%

All the economy features that go with Relay Horizontal Cushioning — *plus* low hung frame for better riding and easier loading. 28″ to top of frame instead of 35″ — a clear gain of 20%. And this with a straight frame — eliminating the "kickup" that consumes valuable space in wheel houses of conventional trucks.

Only Relay could do it—because only Relay hangs the frame and load *below* the wheel axle, free to swing pendulum fashion—cradled against road jars.

This chassis is a money saver for van, bus or tractor. Saves tires, saves repairs, saves loading costs and delays, protects cargo, increases available loading space—a Relay *plus*. See it.

Relay Oscillating Drive Saves Cargo, Tires, Fuel — 3¢ per Average Mile

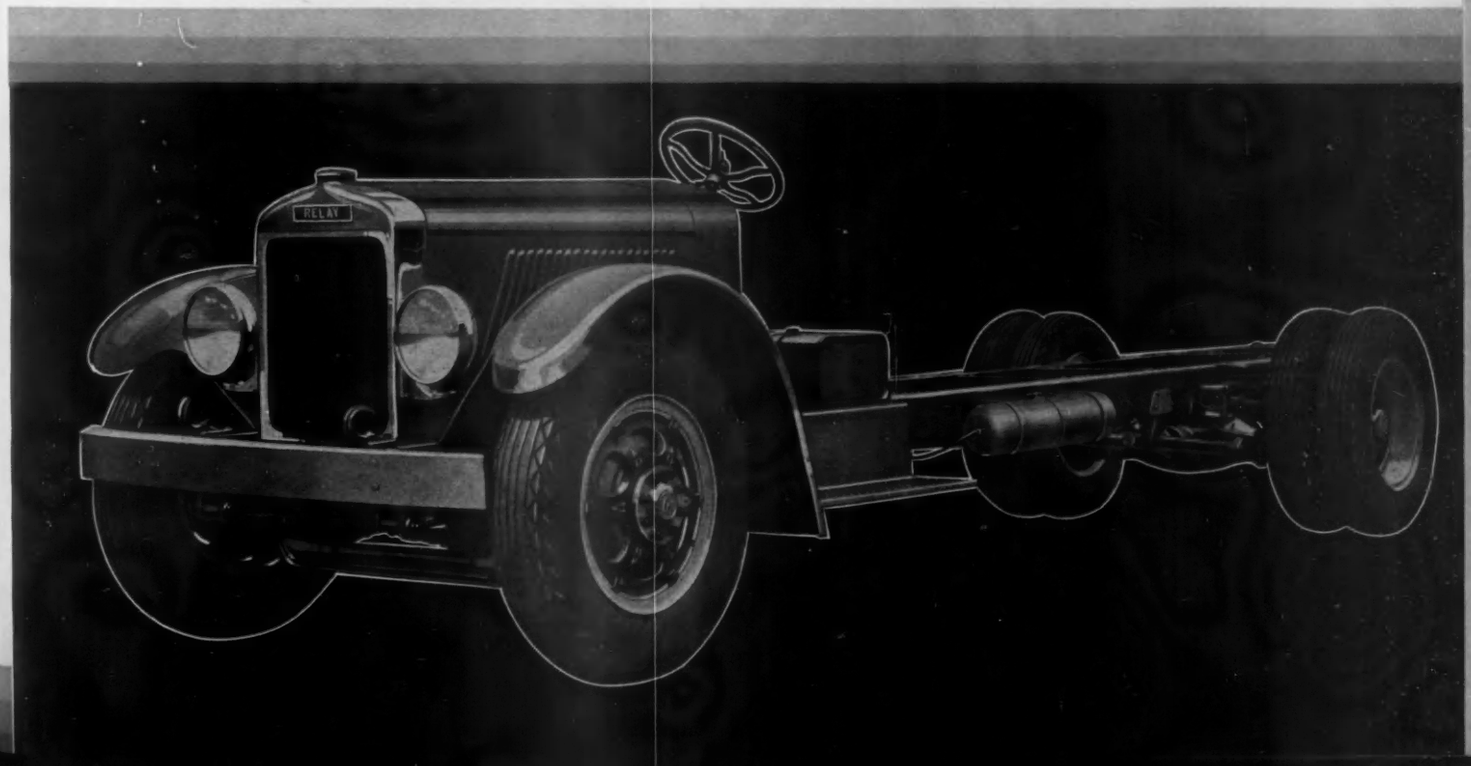
Three hundred Relay owners report an average increase of tire mileage of 68%, compared with conventional trucks. Tires cost money.

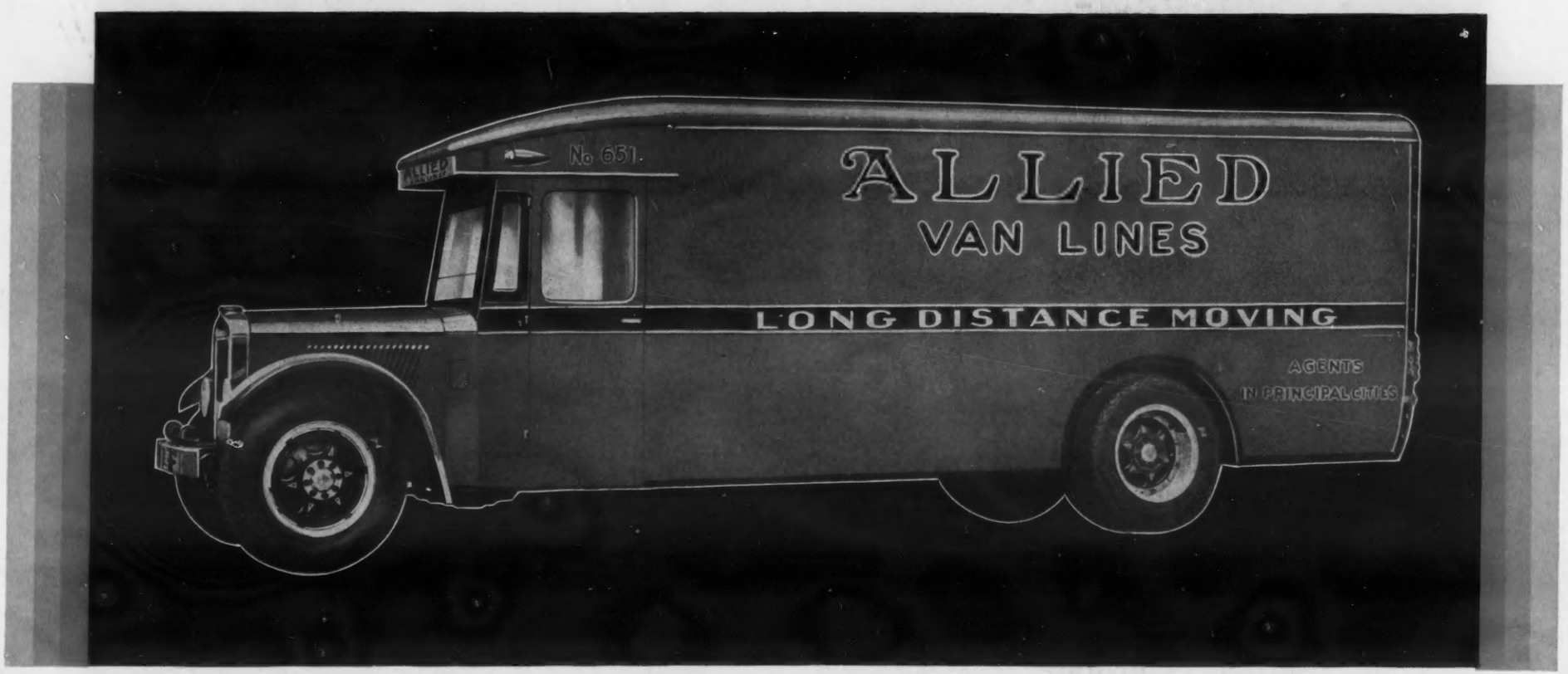
Furniture — other perishable cargo — is delivered in better condition with Relays. Relay does for the truck and cargo horizontally what the springs do vertically — a necessity for modern economical transportation.

Out of every 25¢ spent per average mile of transportation Relay should save you 3¢—a clear profit of $3000.00 every 100,000 miles. These figures include first cost of the truck and can be verified to you by actual cost records of representative owners. Ask for this *proof*.

RELAY MOTORS CORPORATION

LIMA - OHIO





RELAY DRIVE

Reorders prove that Relays *do* save money, beyond even the manufacturer's claims. Ask such fleet owners as Paragon Oil, Western Union, Harrison-Shields, Scott Brothers, H. C. Bohack and hundreds of others. Relay is rapidly forging ahead to a dominant position in the industry. Enjoy its savings *now*,— on your next truck purchases. A motion picture showing graphically why Relay gives you more tire life, more fuel mileage, higher average speeds, better acceleration, improved traction and other money saving advantages will be sent you to look over, before you buy. Write to see it today—no obligation.

Condensed Specifications

Six cylinder engine, 4⅜" bore, 4¾" stroke, 427 cubic inch piston displacement. SAE horsepower rating 45.9. Air brakes operating on all wheels, 8 1-8" frame of special construction, five speed transmission, 9.00-24 front balloon tires and 9.75-24 dual rear balloons. High pressure tires optional. Oscillating drive rear axle.

Commercial Car Specifications—Corrected Monthly

The Specifications, Chassis Prices, Etc., Are Corrected Each Month From Data Supplied Direct by the Makers. Gasoline Tractor-Trucks Will be Found at the End of Gasoline Commercial Cars

• Changes
† New Models

Those Chassis Which Are Sold and Recommended for Bus Use Are Designated in the Following Table by Reference Sign (§) in Front of the Name

(Where prices are not given it is because we have been unable to get them from authoritative sources)

Key of abbreviations page 94

Trade Name and Model	General: Chassis Price	General: Standard Wheelbase (inches)	General: Maximum Wheelbase furnished	General: Tire Size: Front (inches)	General: Tire Size: Rear (inches)	Engine: Make and Model	Engine: Number of Cylinders Bore and Stroke	Engine: N.A.C.C. Rated H.P.	Engine: Valve Arrangement	Engine: Oiling System	Engine: Governor (Make)	Engine: Radiator (Make)	Engine: Fuel System: Carburetor (Make)	Engine: Fuel System: Fuel Feed	Electrical System: Ignition System (Make)	Electrical System: Generator and Starter (Make)	Clutch: Type and Make	Gearset: Make and Model	Gearset: Location	Gearset: No. of Forward Speeds	Universals (Make)	Rear Axle: Make and Model	Rear Axle: Final Drive	Rear Axle: Type	Gear Ratios: Total Reduction in High	Gear Ratios: Total Reduction in Low	Brakes, Location	Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase: Cab to rear of frame	Standard Wheelbase: Cab to rear axle	Chassis Weight (lbs.) (stripped)
1000 Pounds																																
Chevrolet Int. Com	400	107	107	B 4.50/20	B 4.50x20	Own	6-3½x3¾	26.3	H	PG	Non	Har	Car	P	D-R	D-R	P. Own	Own Int.	U	3	Own	Own Int.	S	½	3.82	12.68	E•	Own Int.	Own	.....	26⅝	1815
Dodge Brothers	545	109	109	B 4.75/20	B 4.75/20	Own	4-3⅝x4¼	21.0	L	PC	Non	McC	Car	V	D-R	N-E	P. Roc	Own	U	3	Own	Own	S	½	4.7	14.28	G	Own	Gem	.....	.....	1900
Fargo Packet	595	.....	.....	B 5.00/19	B 5.00/19	Own	6-3x4½	21.6	L	FP	Non	Own	Str	V	N-E	N-E	D. Own	Own	U	3	Own	Own	S	½	4.7	14.28	E†	Own	War	.....	.....	1935
Gen. Mot. T11-1001	625	109⅝	.....	B 5.00/19	B 5.50/19	Pontiac	6-3⅛x3⅞	26.3	L	PC	Non	Lon	Mar	O	D-R	D-R	P. Own	Pontiac	U	3	M.M.	Pontiac	S	½	4.42	14.67	G•	Pontiac	Jac	.....	.....	1885
†Reo Junior 15	785	115	.....	B 5.50/18	B 5.50/18	Con 16E	6-3½x4	27.3	L	PC	Non	Har	Sch	P	D-R	D-R	P. B&B	W-G	U	3	Spi	Own	S	½	4.4	14.6	E	Own	War	52¾	26	2150
†Rugby 614	.....	.....	.....	B 5.00/19	B 5.00/19	Con 22A	6-3½x4	25.3	L	PC	Non	McC	Str	O	A-L	A-L	P. B&B	Own	U	3	M-M	Own	S	½	4.55	14.74	H •	Own	Own	.....	26	1691
•Whippet 96A	360	103¼	103¼	B 4.75/28	B 4.75/28	Own	4-3½x4¼	15.6	L	PC	Non	Own	Til	V	A-L	A-L	P. B&B	Own	U	3	M-M	Own	S	½	4.55	14.74	H	Own	Own	.....	26	1691
1500 Pounds																																
Dodge Brothers	695	124	124	B 5.50/20	B 5.50/20	Own	4-3⅝x4¼	21.0	L	PC	Non	Fed	Car	V	D-R	D-R	P. B&B	W-G	U	3	Spi	Own	S	½	5.63	21.16	G	Own	Han	66¾	31	2260
Dodge Brothers	745	124	124	P 30x5	P 30x5	Own	4-3⅝x4¼	21.0	L	PC	Non	Fed	Car	V	D-R	D-R	P. B&B	W-G	V	3	Spi	Own	S	½	5.63	21.16	G	Own	Han	66¾	31	2380
Dodge Brothers	795	124	124	B 5.50/20	B 5.50/20	Own	6-3⅛x3⅞	27.3	L	PC	Non	Fed	Zen	V	N-E	N-E	P. B&B	W-G	U	3	Spi	Own	S	½	5.11	19.21	G	Own	Han	66¾	31	2360
Dodge Brothers	845	124	124	P 30x5	P 30x5	Own	6-3⅛x3⅞	27.3	L	PC	Non	Fed	Zen	V	N-E	N-E	P. B&B	W-G	V	3	Spi	Own	S	½	5.11	19.21	G	Own	Han	66¾	31	2480
Dover	595	110½	110½	B 30x5	B 5.50/30	Own Super 6	6-2¾x4½	18.2	L	SP	Non	Har	Mar	V	A-L	A-L	D Own	Own	U	3	Spi	Own	S	½	5.6	18.16	K	Own	Gem	50⅝	25⅝	1965
Fargo Clipper	725	.....	.....	B 5.50/18	B 5.50/18	Own	6-3½x4¼	23.4	L	FP	Non	Own	Str	V	D-R	D-R	D. Own	Own	U	3	Spi	Own	S	½	4.9	15.53	E†	Own	.....	.....	.....	2340
Gen. Mot. T25-2501	1285	127¾	140	P 32x6	P 34x7	Buick	6-3⅛x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G•	Tim 11710N	Jac	84½	45¾	3450
Gen. Mot. T25-2502	1245	127¾	140	P 30x5	DP30x5	Buick	6-3⅛x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G•	Tim 11710N	Jac	84½	45¾	3375
Gen. Mot. T25-2503	1165	127¾	140	B 5.50/20	P 32x6	Buick	6-3⅛x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G•	Tim 11710N	Jac	84¼	45¾	3300
Int. Harvester Spec. Del	1170	121	124	B 5.25/30	B 5.25/30	Wau XA	4-3½x4½	19.6	L	PC	Non	Lon	Zen	V	D-R	D-R	Roc	M.M.	U	3	M-M	Eat 502	S	½	4.45	15.1	H•	Eat 200F	Ros	86⅝	50⅝	2400
Kleiber	860	115	115	B 5.50/19	B 5.50/19	Own	6-3½x4½	25.3	L	PC	Non	Lon	Det	O	D-R	D-R	P. Lon	W-G T71	U	3	Spi	Own	S	½	4.45	14.8	E•	Own	Own	.....	.....	1760
†Paige	72b	110	.....	B 5.00/29	B 5.00/29	Con	6-2¾x4¾	19.8	L	PC	Non	Fed	Til	V	A-L	A-L	P. Own	Own	U	3	Spi	Own	S	½	4.7	14.3	K	Own	Ros	.....	.....	2300
Rugby Fast Mail	72b	110	.....	B 6.00/19	B 6.00x19	Own	6-3½x4½	27.3	L	PC	Non	Lon	Str	P	D-R	D-R	D. Lon	W-G	U	3	Spi	Own	S	½	4.7	14.3	K	Own	Ros	.....	.....	2300
Studebaker GN-P	845	115	.....	B 6.00/19	B 6.00x19	Own	6-3½x4½	27.3	L	PC	Non	Lon	Str	P	D-R	D-R	D. Lon	W-G	U	3	Spi	Own	S	½	4.7	14.3	K	Own	Ros	.....	.....	2300
1 Ton																																
Acme 17	.....	136	.....	P 30x5	P 30x5	Con 29L	6-2¾x4¾	18.2	L	PC	Non	Per	Til	V	A-L	A-L	P. B&B	Ful WO	U	4	Blo	Tim 52000H	S	F	5.83	35.9	G	Tim 11703H	Ros	108	58	3000
Acorn 20P	1185	132	.....	P 30x5	P 30x5	Con 16C	6-3⅜x4⅝	27.3	L	PC	Non	Chl	Str	G	A-L	A-L	D. Ful	Ful DU10	U	4	Spi	Tim 52000H	S	F	6.83	43.5	G	Tim 11703H	Gem	98½	55	3915
Atterbury A-6	.....	132	145	P 30x5	P 30x5	Lye WRG	6-2¾x4¾	18.2	L	PC	Non	Fed	Zen	G	A-L	A-L	D. B-L	B-L	U	4	Spi	Cla	B	½	5.5	27.	A†	Shu	Ros	92	.....	3200
Biederman	.....	138	.....	P 30x5	P 30x5	Con 8R	6-3⅜x4½	27.3	L	FP	Non	Own	Zen	V	D-R	A-L	D. B-L	B-L 31	U	3	Spi	Tim 5620	B•	F	6.43	30.86	A	Tim 1250	Ros	.....	.....	3450
Clydesdale 16	.....	140	.....	P 34x5	P 34x5	Con 54	4-4¼x4½	28.9	L	FP	Non	Own	Zen	V	Bos-A	Bos-A	D. B-L	B-L 31	U	3	Spi	Tim 5620	B•	F	6.43	30.86	A	Tim 1250	Ros	.....	.....	3450
Commerce S11	1600	142	.....	P 30x5	P 30x5	Bud H36	6-3⅜x4½	27.3	L	PC	Non	Lon	Zen	V	A-L	A-L	P. B-L	B-L 20	U	4	Blo	Col 54028	S	F	5.1	25 5	G	Col 5530	Han	103½	63	3900
Denby 41	.....	128	.....	P 34x5	P 34x5	Her OX	4-4x5	25.6	L	PC	Non	Lon	Zen	G	A-L	A-L	P. B-L	B-L 20	U	4	Blo	Col 54028	S	F	5.1	25 5	G	Col 5530	Han	103½	63	3900
•Diamond T-215	885	135½	135½	P 30x5	P 30x5	Bud J214	6-3⅜x4	27.3	L	FP	Non	G&O	Zen	O	A-L	A-L	P. B&B	W-G	U	4	Spi	Cla B370	S	F	5.1	33.4	G	Own	Han	85⅝	50	2590
•Diamond T-200	785	128½	128½	P 30x5	P 30x5	Bud H199	4-3⅝x4½	22.5	L	FP	Non	G&O	Zen	O	A-L	A-L	P. B&B	W-G	U	4	Spi	Cla B370	S	F	5.1	33.4	G	Own	Han	85⅝	50	2590
Dodge Brothers	1140	140	140	P 32x6	P 32x6	Own	6-3⅜x3⅞	27.3	L	PC	Non	Fed	Ste	V	N-E	N-E	P. B&B	W-G	U	4	U-P	Own	S	½	5.67	26.40	G	Own	Han	95¾	59¾	3000
Dodge Brothers	1095	140	140	P 30x5	P 30x5	Own	6-3⅜x3⅞	27.3	L	PC	Non	Fed	Ste	V	N-E	N-E	P. B&B	W-G	U	4	U-P	Own	S	½	5.67	26.40	G	Own	Han	95¾	59¾	2955
Dodge Brothers	1110	140	140	P 33x5	P 33x5	Own	6-3⅜x3⅞	27.3	L	PC	Non	Fed	Ste	V	N-E	N-E	P. B&B	W-G	U	4	U-P	Own	S	½	5.67	26.40	G	Own	Han	95¾	59¾	2985
Dodge Brothers	795	133	133	B 6.00/20	P 32x6	Own	4-3⅝x4¼	21.0	L	PC	Han	Fed	Car	V	D-R	D-R	P. B&B	Cla	U	4	U-P	Own	S	½	5.6	36.1	G	Own	Han	85½	50	2470
Dodge Brothers	810	133	133	P 30x5	P 30x5	Own	4-3⅝x4¼	21.0	L	PC	Han	Fed	Car	V	D-R	D-R	P. B&B	Cla	U	4	U-P	Own	S	½	5.6	36.1	G	Own	Han	85½	50	2690
Dodge Brothers	895	133	133	B 6.00/20	P 32x6	Own	6-3⅜x3⅞	27.3	L	PC	Han	Fed	Zen	V	N-E	N-E	P. B&B	Cla	U	4	U-P	Own	S	½	5.1	33.4	G	Own	Han	85⅝	50	2570
Dodge Brothers	910	133	133	P 30x5	P 30x5	Own	6-3⅜x3⅞	27.3	L	PC	Han	Fed	Zen	V	N-E	N-E	P. B&B	Cla	U	4	U-P	Own	S	½	5.1	33.4	G	Own	Han	85⅝	50	2570
Dodge Brothers	795	.....	.....	B 6.00/20	B 32x6	Own	6-3x4½	21.6	L	F	Non	Own	Str	V	N-E	N-E	.....	Own	U	4	U-P	Cla	S	½	5.67	37.19	E†	Own	.....	.....	.....	2725
Fargo Freighter	980	127	151	P 30x5	P 30x5	Wau XA	4-3½x4½	19.6	L	PC	Non	Lon	Zen	V	D-R	D-R	P. B&B	W-G T9	U	4	Spi	Cla B370	B	F	6.38	40.80	G†	Cla F206	Gem	100	50¾	2975
Federal 4FW	1090	132	156	P 30x5	P 30x5	Con 17E	6-3⅜x4	27.3	L	PC	K.P	Lon	Zen	V	D-R	D-R	P. B&B	W-G T9	U	4	Spi	Cla B370	B	F	5.40	34.56	G†	Cla F206	Gem	95	51	3120
Federal E6	.....	140	140	P 30x5	P 30x5	Con 31L	6-2¾x4¾	19.8	L	FP	Non	Lon	Zen	V	A-L	A-L	. Lon	M.M L U	U	4	Blo	Tim 52000H	S	½	5.83	.....	G†	Tim 11703H	Ros	108	73½	3250
Fisher Jr. Express	1600	142	142	P 30x5	P 30x5	Bud H36	6-3⅜x4½	27.3	L	PC	Non	Lon	Zen	V	A-L	A-L	P. B-L	B-L 20	U	4	Blo	Col 54028	S	F	5.1	25 5	G	Col 5530	Han	103½	63	3900
Garford S11	1015	127¾	145¾	P 32x6	P 34x7	Pontiac	6-3⅛x3⅞	26.3	L	PC	Non	Lon	Mar	O	D-R	D-R	P. Own	Mun	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G•	Tim 11710N	Jac	91	52¼	2950
Gen. Mot. T19-2001	975	127¾	145¾	P 30x5	DP30x5	Pontiac	6-3⅛x3⅞	26.3	L	PC	Non	Lon	Mar	O	D-R	D-R	P. Own	Mun	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G•	Tim 11710N	Jac	91	52¼	2875
Gen. Mot. T19-2002	895	127¾	145¾	B 5.50/20	P 32x6	Pontiac	6-3⅛x3⅞	26.3	L	PC	Non	Lon	Mar	O	D-R	D-R	P. Own	Mun	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G•	Tim 11710N	Jac	91	52¼	2800
Gen. Mot. T19-2003	895	127¾	145¾	B 5.50/20	P 32x6	Pontiac	6-3⅛x3⅞	26.3	L	PC	Non	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G•	Tim 11701N	Jac	84½	45¾	3450
Gen. Mot. T25-2501	1285	127¾	140	P 32x6	P 34x7	Buick	6-3⅛x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G•	Tim 11701N	Jac	84½	45¾	3375
Gen. Mot. T25-2502	1245	127¾	140	P 30x5	DP30x5	Buick	6-3⅛x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G•	Tim 11701N	Jac	84½	45¾	3375
Gramm-Bernstein 10	.....	129	146	P 30x5	P 30x5	Lye CT	4-3¾x5	22.5	L	PC	Non	Own	Zen	G	A-L	A-L	P. B&B	W-G	U	3	Blo	Tim 52000H	B	F	.....	.....	I	Tim 11703H	Ros	96	56	3435
Hahn 7H	.....	124	.....	P 30x5	P 30x5	Con 29L	6-2¾x4¾	19.8	L	FP	Non	G&O	Zen	V	A-L	A-L	P. B&B	B-L 20A	U	3•	Spi	Col 36020	S	½	5.12	21.3	I•	Col 3221	Ros	96	56	3780
•Indians 200	.....	137	.....	P 30x5	P 32x6	Con TB	6-3⅜x4⅝	27.3	L	PC	KP‡	Lon	Str	V	D-R	D-R	. Roc	M.M	U	3	M.M.	Eat 1124•	S	½	5.29	52.6	H•	Eat 430F	Ros	86½	50⅝	2430
Int. Harv'tr 6 Sp. Spec	.....	124	124	P 30x5	P 30x5	Wau XA	4-3½x4½	19.6	L	PC	Non	Lon	Zen	V	D-R	D-R	D. W-G	W-G T38L	U	3	Spi	Tim 6254	W	F	5.16	18.88	A•	Tim 1452	Ros	.....	.....	3780
Kissel	.....	140	.....	P 34x5	P 34x5	Own	4-3½x5½	24.1	L	SP	Non	McC	Str	V	D-R	D-R	P. B-L	B-L 214	U	4	Spi	Cla B370	F	½	5.4	34.6	G†	Cla F-206	Ros	96	58	3700
•Kenworth 70	1375	140	152	P 30x5	P 30x5	Con 18E	6-3⅜x4	27.3	L	PC	Non	Per	Zen	V	D-R	D-R																

Key of abbreviations page 94

Trade Name and Model	General: Chassis Price	Standard Wheelbase (inches)	Maximum Wheelbase furnished	Tire Size: Front (inches)	Tire Size: Rear (inches)	Engine: Make and Model	Engine: Number of Cylinders Bore and Stroke	Engine: N.A.C.C. Rated H.P.	Engine: Valve Arrangement	Engine: Oiling System	Engine: Governor (Make)	Engine: Radiator (Make)	Fuel System: Carburetor (Make)	Fuel System: Fuel Feed	Electrical System: Ignition System (Make)	Electrical System: Generator and Starter (Make)	Clutch: Type and Make	Gearset: Make and Model	Gearset: Location	Gearset: No. of Forward Speeds	Universals (Make)	Rear Axle: Make and Model	Rear Axle: Final Drive	Rear Axle: Type	Gear Ratios: Total Reduction in High	Gear Ratios: Total Reduction in Low	Brakes, Location	Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase: Cab to rear of frame	Standard Wheelbase: Cab to rear axle	Chassis Weight (lbs.) (stripped)
1 Ton—Cont'd																																
Kleiber	1450	140	140	P 30x5	P 30x5	Con	6-3½x4	27.3	L	PC	Non	Own	Str	G	D-R	D-R	D. B-L	B-L 20	U	3	Spi	Tim 52000H	B	½	5.36		B†	Tim 12307	Ros	100	64	3000
LaFrance-Republic A-1	990	132	.....	B 5.50/20	P 32x6	Lye WRG	6-2⅞x4¾	19.8	L	PC	Non	G&O	Zen	V	A-L	A-L	P. B&B	Ful	U	4	U-M	Tim 51000H	S	F	5.86	36.1	G	Tim 11710 H	Han	98	56	3000
Larrabee 20	.....	143	160	P 30x5	P 30x5	Con 16C	6-3½x4½	27.3	L	FP	Non	Per	Zen	G	D-R	D-R	D. B-L	B-L	U	3	Spi	Col	B	½	.....	.....	E†	Col	Ros	96	54⅜	3745
Larrabee 20	.....	143	160	P 30x5	P 30x5	Con 16C	6-3½x4½	27.3	L	FP	Non	Chi	Str	G	D-R	DJ	D. B-L	B-L 20	U	3	Spi	Tim 52000H	B	½	5.6	18.7	B	Tim 11703H	Ros	96	66	3000
Le Moon HB10	1500	130	140	P 32x6	P 32x6	Con 16C	6-3½x4½	27.3	L	PC	Non	Own	Zen	G	Eis	A-L	D. Ful	Ful SU10	U	3	.....	Tim 52000H	B	½	.....	.....	A*	Shu 5410	Ros	120	72	2850
Luedinghaus	.....	130	172	P 30x5	P 30x5	Wau V	4-4x5	25.6	L	PC	Non	Own	Zen	V	A-L	A-L	P. B-L	B-L 20	U	4	Blo	Own 20B	R	F	5.14	25.7	G	Col 5530	Han	103½	63	4050
Relay S11	1700	142	162	P 30x5	P 30x5	Bud HS6	6-3½x4½	27.3	L	PC	Non	Lon	Zen	V	D-R	D-R	P. B&B	W-G	U	3	Pet	Own	S	S	5.21	18.47	E†	Own	Ros	86⅜	46⅛	2755
Reo DA	995	127	138	P 30x5	P 30x5	Con 16E	6-3½x4	27.3	L	PC	Non	Har	Sch	V	D-R	D-R	P. B&B	W-G	U	3	Pet	Own	S	S	5.21	18.47	E†	Own	Ros	97⅜	57⅛	2850
Reo DC	1075	138	.....	P 30x5	P 30x5	Con 16E	6-3½x4	27.3	L	PC	Non	Har	Sch	V	D-R	D-R	P. B&B	W-G	U	4	Spi	Sal	S	S	5.37	34.49	I	Sal	War	91¼	53¾	2900
†Rugby 615	.....	135	145	B 5.50/20	P 32x6	Con 22-A	6-3¼x4	25.3	L	PC	Non	McC	Str	O	A-L	A-L	P. B-L	B-L 20	U	3	Blo	Eat	S	B	5.33	22.	H	Eat	Ros	75½	35½	2550
Sanford S	.....	120	.....	P 30x5	P 30x5	Con 31L	6-2⅞x4¾	19.8	L	PC	Non	Fed	Str	V	A-L	A-L	P. B&B	Ful	U	4	Blo	Col 54028	S	F	5.1	25.5	G	Col 5530	Han	103½	63	3900
Selden 7	.....	124	124	P 30x5	P 30x5	Con 29L	6-2⅞x4¾	19.8	L	FP	Non	Own	Zen	G	D-R	A-L	P. B&B	Ful	U	4	Blo	Col 54028	S	F	5.1	25.5	G	Col 5530	Han	103½	63	3900
Selden 7	.....	124	124	P 30x5	P 30x5	Con 29L	6-2⅞x4¾	19.8	L	PC	Non	Lon	Zen	V	A-L	A-L	P. B-L	B-L 20	U	4	Blo	Col 54028	S	F	5.1	25.5	G	Col 5530	Han	103½	63	3900
Service S11	1600	142	162	P 30x5	P 30x5	Bud HS6	6-3½x4½	27.3	L	PC	Non	Lon	Zen	V	D-R	D-R	P. B&B	Cla	U	4	Spi	Sal	S	F	5.6	35.84	G	Sal	Ros	77⅛	40⅛	2905
Stewart 30	695	130	140	B*6.50/20	B 6.50/20	Lye	4-3¾x4½	22.5	L	PC	.....	Fed	Str	V	D-R	D-R	P. B&B	Cla	U	4	Spi	Sal	S	F	5.6	35.84	G	Sal	Ros	77⅛	40⅛	2965
Stewart 30X	795	130	140	B 6.50/20	B 6.50/20	Lye WS6	6-2⅞x4¾	19.8	L	PC	.....	Fed	Str	V	D-R	D-R	P. B&B	Cla	U	4	Spi	Sal	S	F	5.6	35.84	G	Sal	Ros	77⅛	40⅛	2965
Studebaker GK-N	1095	140	.....	P 30x5	P 30x5	Own	6-3½x4½	27.3	L	PC	Non	McC	Str	P	D-R	D-R	D. Lon	Own	U	3	Spi	Own	S	½	4.64	13.8	G	Own	Ros	90⅝	62⅝	2900
*Studebaker GN-S	1045	130	.....	B 6.00/20	P 30x5	Own	6-3½x4½	27.3	L	PC	Non	McC	Str	P	D-R	D-R	D. Lon	Own	U	3	Spi	Own	S	½	4.64	13.8	G	Own	Ros	73⅞	45⅜	2830
United 16	.....	122½	.....	P 32x4½	P 32x4½	Wau X	4-3½x4½	19.6	L	PC	Non	Per	Zen	G	A-L	A-L	P. B&B	W-G T 71	U	3	Blo	Cla B-365	S	½	5.66	17.0	A	Shu 5400	Ros	96	57	2400
United 16C	.....	122½	.....	P 32x4½	P 32x4½	Con 29L	6-2⅞x4¾	19.8	L	PC	Non	Per	Til	V	A-L	A-L	P. B&B	W-G T 71	U	3	Blo	Cla B-365	S	½	5.66	17.0	A	Shu 5400	Ros	94	55	2500
White 15B	1545	133½°	150	P 30x5	P 30x5	Own GKA	4-3¾x5½	22.5	L	PG	Non	Own	Zen	V	L-N	L-N	P. Own	Own 15	A	4	Spi	Own 15B	S	½	5.36	18.6	A*	Own 15	Own	96⅞	57⅜	3242
White 60	1850	138°	157	P 30x5	P 30x5	Own 2A	6-3½x4½	29.4	L	FP	Non	Own	Zen	V	D-R	D-R	P. Own	Own 3B	U	3	Spi	Own 4C	S	½	4.73	17.86	G†	Own 4D	Han	112	58¾	3562
World. D-60	.....	143	151	P 32x6	P 32x6	Lye 48L	6-3¼x4½	25.3	L	PC	Non	Mod	Zen	V	A-L	A-L	P. Lon	Ful	U	4	Blo	Tim	S	F	5.83	36.0	G†	Tim	Ros	108	60	3600
1¼ Ton																																
Biederman	.....	154	154	P 32x6	P 32x6	Con 8R	6-3½x4¼	27.3	L	PC	Han	Own	Zen	G	D-R	A-L	D. B-L	B-L 31	U	3	Spi	Cla	B	½	7.2	35.0	A*	Shu	Ros	104	.....	3600
*Brockway Junior	.....	130	130	P 30x5	P 30x5	Wis C	4-3¾x5	22.5	L	PC	Non	G&O	Zen	V	A-L	A-L	P. B&B	B-L 20	U	4	Spi	Col 36020	S	½	21.27	20.84	I*	Col 3204	Ros	96	56	3100
*Brockway 75	.....	137°	.....	P 32x6	P 32x6	Con 27B	6-3½x4⅝	27.3	L	FP	Non	G&O	Zen	V	A-L	A-L	P. B&B	B-L 20	U	4	Spi	Col 36020	S	½	25.63	20.84	I*	Col 4005	Ros	.....	.....	3450
Clinton 20B	.....	150	Opt.	P 30x5	P 30x5	Bud WTU	4-3¾x5½	22.5	L	PC	Non	Per	Zen	V	Bos-A	Bos-A	D. B-L	B-L 31	U	3	Spi	Tim 6258	W	½	6.75	32.4	A*	Tim 1250	Ros	.....	.....	3250
Clydesdale 10A	.....	154°	.....	P 34x5	P 34x5	Con S4	4-4¼x4½	28.9	L	FP	Non	Own	Zen	V	D-R	D-R	D. B-L	B-L 20	U	4	Spi	Tim 52000H	S	F	5.83	29.15	G†	Tim 11703H	Ros	108	64	3380
Corbitt 620	.....	137	150	P 32x6	P 32x6	Con 18E	6-3½x4	27.3	L	FP	Non	Per	Zen	V	D-R	D-R	D. B-L	B-L 20A	U	3	Spi	Tim 52000H	B	F	5.83	26.19	G	Tim 11703H	Ros	103½	56	3500
*Day-Elder MF	1345	131	131	P 30x5	P 30x5	Con 16C	6-3½x4½	27.3	L	FP	Non	G&O	Zen	V	D-R	D-R	D. B-L	B-L 20A	U	4	Spi	Cla 365	S	½	5.66	36.8	A	Shu	Gem	120	.....	2910
Defiance RU-45	.....	145	160	P 32x6	P 32x6	Con	6-3¼x4½	25.3	L	FP	Non	Own	Zen	V	A-L	A-L	D. Ful	Ful KU	U	4	Spi	Tim 52000	B	F	5.57	27.85	G	Tim 11703H	Ros	132	85½	4300
*Fageol 106	1425	161	173	B 7.00/32	B 7.00/32	Wau T8	6-3½x4¾	23.44	L	PC	.....	Lon	Zen	V	D-R	D-R	D. B-L	B-L 20	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G*	Tim 11710N	Jac	91	52¼	2950
Gen. Mot. T19-2001	1015	127¾°	145¾	P 32x6	P 34x7	Pontiac	6-3¼x3⅞	26.3	L	PC	Non	Lon	Mar	O	D-R	D-R	P. Own	Mun	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G*	Tim 11710N	Jac	91	52¼	2875
Gen. Mot. T19-2002	975	127¾°	145¾	P 30x5	DP30x5	Pontiac	6-3¼x3⅞	26.3	L	PC	Non	Lon	Mar	O	D-R	D-R	P. Own	Mun	U	4	Spi	Tim 5261N	S	½	6.14	34.11	G*	Tim 11710N	Jac	91	52¼	2875
Gotfredson RB24	.....	131	160	P 30x5	P 30x5	Bud WTU	4-3¾x5½	22.5	L	PC	Non	McC	Zen	V	D-R	D-R	P. B&B	B-L 20A	U	3	Spi	Tim 52000H	B	½	5.83	24.19	G	Tim 11703H	Ros	.....	.....	3200
*Gotfredson RB-26	.....	136¾	.....	P 30x5	P 30x5	Own	6-3½x4	27.3	L	PC	Non	Lon	Joh	O	D-R	D-R	D. B-L	B-L 20-4	U	4	Spi	Tim 52000H	B	F	Opt.	Opt.	I	Tim 11703H	Ros	.....	.....	3400
Gramm-Bernstein 10	.....	129	146	P 30x5	P 30x5	Lye CT	4-3¾x5	22.5	L	PC	Non	Own	Zen	G	A-L	A-L	D. Mun	Mun T23	U	3	Spi	Sal A	B	½	5.85	23.4	B*	Sal D	Ros	97	57⅜	3020
*Indiana 11X	.....	120	120	P 30x5	P 30x5	Her OX	4-4x5	25.6	L	PC	Non	McC	Str	G	A-L	A-L	P. B-L	B-L 31	U	3	Spi	Cla B365	S	½	5.1	24.48	A	Shu 5405	Ros	82½	44½	3350
*Indiana 11	.....	129½°	165	P 30x5	P 30x5	Her OX	4-4x5	25.6	L	PC	Non	McC	Str	G	A-L	A-L	P. B&B	B-L 31	U	3	Spi	Cla B365	S	½	5.1	24.48	A	Shu 5405	Ros	99	54⅛	3500
†Indiana 74	.....	137°	149	P 32x6	P32x6	Con 27B	6-3½x4⅝	27.3	L	PC	KP‡	Lon	Str	V	A-L	A-L	P. B&B	B-L 20	U	4	Spi	Col 36020	S	½	5.12	25.63	I*	Col 4005	Ros	95	55	3450
Int. Harvester S-24	.....	130	.....	P 30x5	P 30x5	Lye CT	4-3¾x5	22.5	L	PC	Non	Lon	Zeh	V	D-R	D-R	P. Own	Own	U	3	M.M.	Eat 1002	S	½	5.33	21.3	H*	Eat 430F	CAS	94	51½	3200
Int. Harvester S-26	.....	130	.....	P 30x5	P 30x5	Lye 48L	6-3¼x4½	25.3	L	PC	Non	Lon	Zeh	V	D-R	D-R	P. Own	Own	U	3	M.M.	Eat 1002	S	½	5.33	21.3	H*	Eat 430F	CAS	94	51½	3250
*Kenworth 85	1550	152	152	P 30x5	DP30x5	C on18E	6-3½x4	27.3	L	PC	Non	Lon	Zen	V	A-L	A-L	P. B-L	B-L 20	U	4	Spi	Cla B-370	S	F	5.4	34.6	G†	Cla F208	Ros	152	114	3900
*Moreland Ace	1550	136½	.....	B 7.00/20	B 7.00/20	Con 18E	6-3½x4	27.34	L	PC	Non	Lon	Zen	V	A-L	A-L	P. B-L	B-L 20	U	4	Cle	Tim 52000H	S	F	5.83	29.17	G†	Tim 11703H	Ros	101⅛	56	3000
*Republic C-1	.....	144	.....	B 6.00/20	P 32x6	Lye 48L	6-3¼x4½	25.3	L	PC	Non	G&O	Zen	V	A-L	A-L	D. Ful	Ful	U	3	U-M	Eat	B	B	5.6	28.3	G†	Cla	Ros	111	62½	3300
Republic 75-6	.....	128½	.....	P 30x5	P 30x5	Lye 48L	6-3¼x4½	25.3	L	PC	Non	Own	Zen	V	A-L	A-L	D. Ful	Ful	U	3	U-M	Eat	B	½	5.33	21.3	A*	Eat	Han	98	53¼	3150
Republic 75	.....	124°	.....	P 30x5	P 30x5	Lye CT	4-3¾x5	22.5	L	PC	Non	Own	Zen	V	A-L	A-L	D. Ful	Ful	U	3	U-M	Eat	B	½	5.33	21.3	A*	Eat	Han	98	53¼	3000
Sanford SE	.....	130	.....	P 30x5	P 30x5	Con	6-2⅞x4¾	19.7	...	FP	Non	Own	Str	P	D-R	D-R	D. B-L	B-L	U	3	Blo	Eat	B	½	5.38	22.1	E*	Eat	Ros	86¾	46½	2650
Sterling DB7-64-18E	.....	137	150	P 32x6	P 32x6	Con 18E	6-3½x4	27.3	L	FP	.....	Per	Zen	V	.....	.....	D. B-L	B-L 20	U	4	Har	Tim 52000H	B	S	5.82	29.13	G	Tim 11703H	Ros	104	60	3355
Stewart 16	1295	130	160	P 32x6	P 32x6	Lye CT	4-3¾x5	22.5	L	FP	Non	Own	Str	G	D-R	D-R‡	D. Ful	Ful SU-1	U	4	Spi	Cla B-365	S	⅝	5.6	22.0	G	Col 3008	Gem	95¼	48⅝	3490
Stewart 16X	1295	130	160	P 32x6	P 32x6	Lye	6-3¼x4½	25.3	L	FP	Non	Own	Str	G	D-R	D-R	D. Ful	Ful	U	4	Spi	Cla	S	½	5.6	22.0	G		Ros	94¾	48⅜	3490
*Studebaker GN-N	1245	146	.....	P 30x5	P 32x6	Own	6-3½x4½	27.3	L	PC	Non	McC	Str	P	D-R	D-R	D. Lon	Clark	U	4	Spi	Clark	S	½	5.10	33.5	G	Own	Ros	89⅜	61⅜	3105
United 20	.....	128	.....	P 30x5	P 30x5	Her OX	4-4x5	25.6	L	PC	Non	Per	Str	G	A-L	A-L	D. B-L	B-L 20B	U	3	Blo	Cla B-365	S	½	5 66	17.00	A	Shu 5400	Ros	95⅝	52⅜	2900
United 20C6	.....	128	.....	P 30x5	P 30x5	Con 16C	6-3½x4⅝	27.3	L	PC	Non	Per	.....	V	A-L	A-L	D. B-L	B-L 20B	U	3	Blo	Cla B-365	S	½	5 66	17.00	A	Shu 5400	Ros	91¾	48½	2900
Valley	1295	132	143	P 32x6	P 33x5	Her OX	4-4x5	25.6	L	FP	Non	Har	.....	V	D-R	D-R	D. Ful	Ful	U	3	Own	Own	S	½	4.46	Opt	...	Own F	.....	.....	.....	.....
White 87	3725	146°	157½	P 32x6	P 32x6	Own GRC	4-4x5¾	25.6	L	FP	Own	Own	Zen	V	L-N	L-N	P. Own	Own GRBB	U	4	Spi	Own 57	S	½	4 67	19.3	A*	Own 57	Own	100⅛	62⅛	3774
1½ Ton																																
Acme 24	.....	144	.....	P 30x5	P 30x5	Con S4	4-4¼x4½	28.9	L	PC	Non	Per	Str	V	A-L	A-L	D. B-L	B-L 31	U	3	Blo	Col 54000	S	F	5.85	28.2	A	Col 5400	Ros	102⅝	66⅝	3450
Acme 26	.....	144	.....	P 30x5	P 30x5	Con 16C	6-3½x4½	27.3	L	PC	Non	Per	Str	V	A-L	A-L	D. B-L	B-L 31	U	3	Blo	Col 54000	S	F	5.85	28.2	A	Col 5400	Ros	102⅝	66⅝	3450
Acorn 30	2300	144	.....	S 34x4	S 34x6	Con S4	4-4¼x4½	28.9	L	PC	Non	Chi	Str	G	Bos-R	.....	D. Ful	Ful SU 12	U	3	Spi	Cla B720	S	½	Opt	Opt.	A	Shu 350	Ros	.....	.....	4400
Acorn 30-P	2300	144	.....	P 32x6	DP32x6	Con 16C	6-3½x4½	27.3	L	PC	Non	Chi	Str	G	A-L	A-L	D. Ful	Ful SU 12	U	3	Spi	Cla B365	S	½	Opt	Opt	A	Shu 350	Ros	.....	.....	.....
‖Armleder 30	.....	148°	187	S 34x4‡	S 34x6‡	Her OX	4-4x5	25.6	L	PC	Non	Lon	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Spi	Tim	W	½	7.25	39.0	A*	Tim	Ros	121	71⅝	4400
Armleder 30B	.....	150°	188	S 34x4‡	S 34x6‡	Bud KBU-1	4-4x5¼	25.6	L	PC	Non	Lon	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Spi	Tim	W	½	7.25	39.0	A*	Tim	Ros	121	71⅝	4500
Armleder 30-6	.....	153°	192	S 34x4‡	S 34x6‡	Bud HS6	6-3½x4½	27.3	L	PC	Non	Lon	Zen	G	A-L	A-L	D. B-L	B-L	U	4	Spi	Tim 52000H	S	F	6.83	34.15	G	Tim 11703H	Gem	120	68	4225
Atterbury K6	.....	145	160	P 30x5	DP30x5	Lye 48L	6-3¼x4½	25.3	L	PC	Non	Fed	Zen	G	A-L	A-L	D. B-L	B-L 35	U	4	Spi	Own 8A	S	F	5.22	27.92	H‖	Tim 14703	Ros	115¼	63⅝	4400
*Autocar 8A	2700	150	192	P 32x6	P 32x6	Her WXC	6-4x4½	38.4	L	PC	Non	Per	Str	V	L-N	D-R	P. Lon	B-L 35	U	3	Spi	Tim	W	½	7.75	38 0	A*	Shu	Ros	140	.....	4600
Biederman	.....	166°	170	S 34x5	S 34x8	Con 8R	6-3½x4½	27 3	L	PC	Non	Own	Zen	G	D-R	D-R	D. B-L	B-L 31	U	3	Spi	Col 55001	S	F	5.12	20.96	I*	Col 5501	Ros	126	72	3640
*Brockway E	.....	147½°	161	P 32x6	P 32x6	Wis SU	4-4x5	25.6	H	PC	Opt‡	G&O	Zen	V	L-N	I-N	D. B-L	B-L 30	U	3	Spi	Col 55001	S	F	5.12	20.96	I*	Col 4002	Ros	111	67	3850
*Brockway 90	.....	149°	.....	P 32x6	P 32x6	Con-Brock	6-3½x4⅝	27.3	L	FP	Opt‡	G&O	Zen	V	A-L	A-L	P. B&B	B-L 20	U	4	Spi	Col 55001	S	F	5.12	20.96	I*	Col 4002	Ros	111	67	3850

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Key of abbreviations page 94

Trade Name and Model	General: Chassis Price	Standard Wheelbase (inches)	Maximum Wheelbase furnished	Tire Size: Front (inches)	Tire Size: Rear (inches)	Engine: Make and Model	Engine: Number of Cylinders Bore and Stroke	Engine: N.A.C.C. Rated H.P.	Engine: Valve Arrangement	Engine: Oiling System	Engine: Governor (Make)	Engine: Radiator (Make)	Engine: Fuel System: Carburetor (Make)	Engine: Fuel System: Fuel Feed	Electrical System: Ignition System (Make)	Electrical System: Generator and Starter (Make)	Clutch: Type and Make	Gearset: Make and Model	Gearset: Location	Gearset: No. of Forward Speeds	Universals (Make)	Rear Axle: Make and Model	Rear Axle: Final Drive	Rear Axle: Type	Gear Ratios: Total Reduction in High	Gear Ratios: Total Reduction in Low	Brakes, Location	Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase: Cab to rear of frame	Standard Wheelbase: Cab to rear axle	Chassis Weight (lbs.) (stripped)
1½ Ton—Cont'd																																
Willys-Knight 16	1595	151	174	P 30x5	P 32x6	Own	6-2¼x4¾	20.7	X	PC	Han	Fed	Til	V	A-L	A-L	P. B&B	Cov	U	4	Blo	Eat 1504	S	½	6.63	43.99	H*	Own	Ros	126	73⅜	3400
White 20A	2125	145½°	168	P 34x5	DP34x5	Own GKA	4-3¾x5½	22.5	L	PG	Non	Own	Zen	V	L-N	L-N	P. Own	Own 20A	A	4	Spi	Own 20A	R	½	9.25	32.1	A*	Own 20A	Own	106⅞	69⅜	4412
White 61	2450	148°	170	P 30x5	DP30x5	Own 2A	6-3½x4½	29.4	L	FP	Han	Own	Zen	V	D-R	D-R	P. Own	Own 5B	U	4	Spi	Own 7C	S	½	5.67	23.4	G†	Own 7D	Han	115⅛	68⅛	4612
Witt-Will NN	2850	144	172	S 36x4	S 36x7	Con S4	4-4¼x5½	28.9	L	PC	Non	Own	Zen	V	Eis	D-R	D. B-L	B-L 35	U	4	Spi	Tim 64600D	W	½	7.25	30.3	A*	Tim 15300	Ros	136⅛	79⅛	4300
Witt-Will C2	....	144	....	P 30x5	DP30x5	Con 16C	6-3⅜x4⅝	27.3	L	PC	Non	Per	Zen	O	D-R	D-R	D. B-L	B-L 35	U	4	Spi	Tim 56000	S	F	7.4	46.99	G†	Tim 14703	Ros	136⅛	79⅛	4300
Woods 32	1895	160°	....	P 30x5	DP30x5	Her WXA2	6-3½x4½	29.4	L	PC	Han	Chi	Zen	V	A-L	A-L	D. B-L	B-L	U	4	U-M	Tim	S	F	*5.83	29.15	G†	Tim	Ros	....	....	4450
World D88	....	147½	177½	P 30x5	DP30x5	Lyc	8-2⅛x4¾	26.4	L	PC	Han	Mod	Zen	O	A-L	A-L	P. Lon	Ful	U	4	Blo	Tim	S	F	5.83	37.8	F	Shu	Ros	118	71	4000
1¾ Ton																																
Gen. Mot. T30-3001	1530	136°	164	P 32x6	P 36x8	Buick	6-3⅛x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Eat 1616	S	½	5.63	28.60	G*	Own	Jac	101	58	4032
Gen. Mot. T30-3002	1505	136°	164	P 32x6	DP32x6	Buick	6-3⅛x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Eat 1616	S	½	5.63	28.60	G*	Own	Jac	101	58	3957
Sanford AX	....	150	....	P 34x7	P 34x7	Con 18E	6-3⅝x4	27.3	L	PC	Non	Fed	Strom	V	D-R	D-R	D. B-L	B-L	U	3	Blo	Eat	S	½	6.38	26.4	H	Eat	Ros	107½	66¼	3000
2 Ton																																
Acme 47	....	162	....	P 32x6	DP32x6	Con 16C	6-3⅜x4⅝	27.3	L	PC	Non	Per	Str	V	A-L	A-L	D. B-L	B-L	U	4	Blo	Tim 54000-H	S	F	6.8	32.6	G	Tim 14703H	Ros	132⅝	82⅝	4350
Acorn 40	2500	144	....	S 36x4	S 36x7	Con S4	4-4¼x4½	28.9	L	PC	Non	Chi	Str	G	Bos-R	....	D. Ful	Ful SU 12	U	3	Spi	Cla B720	S	½	Opt	Opt	A	Shu 350	Ros	....	....	4600
Acorn 40P	2600	162	....	P 32x6	DP32x6	Con 16C	6-3⅜x4⅝	27.3	L	PC	Non	Chi	Str	G	A-L	A-L	D. Ful	Ful GU 14	U	3	Spi	Tim 56001H	S	½	6.16	Opt	A	Tim 14703H	Ros	144	96	5400
*Am. La France Chief	3650	180	Opt.	P 32x6	DP32x6	Own	6-3¾x5	33.7	L	PC	Own	G&O	Str	V	D-R	D-R	P. B&B	Own	A	4	Spi	Tim 65000BX	W	F	5.00	24.0	E*	Tim 14703BX	Ros	Opt	Opt	6200
Armleder 40	....	149	187	S 36x4	S 36x8	Her OX	4-4x5	25.6	L	PC	Non	Non	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Spi	Tim	W	F	7.25	38.8	A*	Tim	Ros	121	72⅝	4600
Armleder 40-6	....	154	200	S 36x4	S 36x8	Bud HS	6-3⅜x4½	27.3	L	PC	Non	Lon	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Spi	Tim	W	F	7.25	38.8	A*	Tim	Ros	121	72⅝	4800
Atterbury G6	....	145	160	P 32x6	DP32x6	Lyc 4SL	6-3¼x4½	25.3	L	PC	Non	Fed	Zen	G	A-L	A-L	D. B-L	B-L	U	4	Spi	Tim 54000H	B	F	6.80	34.00	G	Tim 12703H	Gem	120	68	4450
*Autocar SD	3000	150	192	P 32x6	DP32x6	Her WXC	6-4x4½	38.4	L	PC	Non	Per	Str	V	L-N	D-R	P. Lon	B-L 35	U†	4	Spi	Own SD	R	F	6.33	33.86	H§	Tim 14703	Ros	115¼	63⅝	4850
Brockway 120	....	156°	188	P 32x6	DP32x6	Con 30B	6-4x4½	38.4	H	FP	KP‡	G&O	Zen	O	A-L	A-L	D. B-L	B-L 35	U	4	Spi	Tim 54100H	S	F	5.85	31.3	I†	Col 5536	Ros	108	69	5200
Brockway 140	....	156°	188	P 32x6	DP32x6	Con 30B	6-4x4½	30.4	H	FP	KP‡	G&O	Zen	O	A-L	A-L	D. B-L	B-L 35	U	4	Spi	Wis 4916L	R	F	6.6	35.3	I*	Col 5536	Ros	108	69	5500
*Brockway S-31	....	150°	160	S 34x4‡	S 34x8‡	Wis SU	4-4x5	25.6	H	PC	K.P.	Bus	Zen	V	Eis	L-N‡	D. B-L	B-L 35	U	4	Spi	Tim 64600D	W	½	7.25	38.8	B*	Tim 14703	Ros	129	77	4850
Chicago 20A	....	135°	195	S 34x4	S 34x7	Wau V	4-4x5	25.6	L	FC	Wau	Chi	Zen	G	Apo	A-L‡	D. B-L	B-L 35	U	4	Spi	Tim 63721H	W	F	6.25	33.4	G†	Tim 14703H	Ros	Opt	Opt	4870
Chicago 21A	....	135°	195	P 32x6	DP32x6	Wau XK	6-3⅜x4½	33.7	L	FC	Wau	Chi	Zen	G	Apo	A-L‡	D. B-L	B-L 35	U	4	Spi	Tim 63721H	W	F	6.25	33.4	G†	Tim 14703H	Ros	Opt	Opt	5115
Clinton 45	....	162	Opt.	S 34x4‡	DS34x4‡	Bud KTU	4-4x5¼	25.6	L	PC	Non	Per	Zen	V	Spl	D-R	D. B-L	B-L 35	A	4	Blo	Tim 65000H	W	½	7.75	41.5	A*	Tim 15302	Ros	Opt	Opt	4875
Clydesdale 9	....	160°	....	S 34x4	S 34x6	Con S4	4-4¼x4½	28.9	L	FP	Own	Own	Zen	V	Bos-A	Bos-A	D. B-L	B-L 35	U	4	Spi	Tim 64600	W	½	7.75	41.46	A*	Tim 1460	Ros	....	....	4600
Coleman C-25	....	109	144	P 34x7	P 34x7	Bud DW6	6-3⅜x5	27.3	L	FP	Non	R-T	Str	V	D-R	D-R	D. Ful	Ful GU 12	U	8	Spi	Own	W	F	7.25	139.0	A*	Own	Ros	108	78	6100
Commerce 40	3240	168	185	P 36x6	DP36x6	Bud DS6	6-3⅝x5	31.5	L	PC	Non	Lon	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Blo	Tim 63702	W	F	6.5	34.8	G	Tim 14704H	Han	144	90	4900
Commerce S11	2030	162	....	P 32x6	DP32x6	Bud HS6	6-3⅜x4½	27.3	L	PC	Non	Lon	Zen	V	A-L	A-L	P. B-L	B-L 20	U	4	Blo	Tim 54000	S	F	5.8	29.2	G	Col 5530	Han	133½	83	4500
Concord GX-6	....	163	185	P 32x6	DP32x6	Bud DW6	6-3¾x5	33.7	L	PC	Non	Own	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Blo	Wis 4610	R	F	6.8	36.38	A‡	Tim 15300	Ros	Opt	85	5140
Corbitt 9B6	....	150	181	P 32x6	DP32x6	Con 16C	6-3⅜x4⅝	27.3	L	FP	Non	Per	Zen	V	D-R	D-R	D. B-L	B-L 214	U	4	Spi	Tim 54000H	S	F	5.83	29.15	G†	Tim 14703H	Ros	Opt	Opt	4200
*Corbitt 12B6	....	170	220	P 32x6	DP32x6	Con 16R	6-4x4½	38.4	H	FP	Non	Per	Zen	V	Eis	D-R‡	D. B-L	B-L 51	U	4	Spi	Tim 56001H	B	F	Opt	Opt	G†	Tim 14703	Ros	134	87	4860
Corbitt 12W6	....	165	220	P 32x6	DP32x6	Con 16R	6-4x4½	38.4	H	FP	Non	Per	Zen	V	Eis	D-R‡	D. B-L	B-L 51	U	4	Spi	Tim 63703H	W	F	Opt	Opt	G†	Tim 14703	Ros	134	82	4910
*Day-Elder HF	2500	156	186	S 34x4‡	S 34x7‡	Con 16C	6-3⅜x4⅝	27.3	L	FP	Non	Bus	Zen	V	D-R	D-R	D. B-L	B-L 35	U	4	Spi	Tim 63702H	W	F	7.66	41.46	G	Tim 14703H	Ros	132	75½	4900
*Day-Elder HBF	2500	156	186	P 32x6	DP32x6	Con 16C	6-3⅜x4⅝	27.3	L	FP	Non	Bus	Zen	V	D-R	D-R	D. B-L	B-L 35	U	4	Spi	Tim 54000H	B	F	6.80	36.38	G	Tim 14703H	Ros	132	75½	4800
Defiance TT62T	....	175	220	P 32x6	DP32x6	Con S4	4-4¼x4½	28.9	L	PC	Non	Own	Zen	V	A-L	A-L	D. Ful	Ful	U	4	Spi	Tim 6460	W	½	7.25	Opt	A	Shu	Ros	150	97	5400
Diamond 303	1745	160½	178¾	P 32x6	DP32x6	Her WXB	6-3¾x4½	33.7	L	PC	Han	G&O	Zen	V	A-L	A-L	D. Cov	Cov	U	4	Spi	Tim 54002H	S	F	5.66	33.1	G†	Tim 12703H	Ros	....	77⅛	4850
Dodge Brothers	1595	150	150	P 32x6	P 34x7	Own	6-3⅜x4½	27.3	L	PC	KP	Fed	Zen	V	N-E	N-E	P. B&B	Own	U	4	U-P	Own	S	½	6.38	41.44	G†	Own	Han	106¾	69⅜	3930
Dodge Brothers	1645	165	165	P 32x6	P 34x7	Own	6-3⅜x4½	27.3	L	PC	KP	Fed	Zen	V	N-E	N-E	P. B&B	Own	U	4	U-P	Own	S	½	6.38	41.44	G†	Own	Han	132¾	84⅜	4070
Dodge Brothers	1670	150	150	P 32x6	DP32x6	Own	6-3⅜x4½	27.3	L	PC	KP	Fed	Zen	V	N-E	N-E	P. B&B	Own	U	4	U-P	Own	S	½	6.38	41.44	G†	Own	Han	106¾	69⅜	3960
Dodge Brothers	1700	150	150	P 32x6	DP32x6	Own	6-3⅜x4½	27.3	L	PC	KP	Fed	Zen	V	N-E	N-E	P. B&B	Own	U	4	U-P	Own	S	½	6.38	41.44	G†	Own	Han	106¾	69⅜	4140
Dodge Brothers	1720	165	165	P 32x6	DP32x6	Own	6-3⅜x4½	27.3	L	PC	KP	Fed	Zen	V	N-E	N-E	P. B&B	Own	U	4	U-P	Own	S	½	6.38	41.44	G†	Own	Han	132¾	84⅜	4100
Dodge Brothers	1750	165	165	P 32x6	DP32x6	Own	6-3⅜x4½	27.3	L	PC	KP	Fed	Zen	V	N-E	N-E	P. B&B	Own	U	4	U-P	Own	S	½	6.38	41.44	G†	Own	Han	132¾	84⅜	4280
Duplex S	....	160	....	P 32x6	P 36x8	Bud DW6	6-3⅜x5	33.7	L	FP	Non	Mod	Str	V	A-L	A-L	D. B-L	B-L	U	4	Pet	Tim 65001	W	F	6.75	36.2	A*	Shu 5510	Ros	....	....	5600
Fageol 130	2050	156°	172	P 30x5	DP30x5	Wau V	4-4x5	25.6	L	PC	Wau	Own	Zen	V	D-R	D-R	D. B-L	B-L 35	U	4	Spi	Tim 54000H	B	F	4.62	22.2	G†	Tim 12700H	Ros	128⅞	83⅛	4500
Fageol 135	2250	162°	196	P 30x5	DP30x5	Wau XL	6-3½x4½	29.4	L	PC	Non	Own	Zen	V	D-R	D-R	D. B-L	B-L 35	U	4	Spi	Tim 54000H	B	F	4.62	22.2	G†	Tim 12700H	Ros	144	83⅛	4800
Federal A6	1855	151	176	P 32x6	DP32x6	Con 16C	6-3⅜x4⅝	27.3	L	PC	K.P.	Lon	Zen	V	D-R	D-R	P. B&B	Own	A	4	Pet	Cla B610	B	F	6.38	38.51	G†	Cla F304	Ros	119	71	4580
Fisher Mer. Ex	....	146	160	S 34x5	S 34x7	Con 16C	6-3⅜x4⅝	27.3	L	FP	Non	Lon	Zen	V	A-L	A-L	D. Cov	Cov W4C	U	4	Blo	Tim 63720H	W	F	7.33	42 8	G†	Tim 14703H	Ros	120	79	4500
Fisher Mer. Ex	....	146	160	P 32x6	DP32x6	Con 16C	6-3⅜x4⅝	27.3	L	FP	Non	Lon	Zen	V	A-L	A-L	D. Cov	Cov W4C	U	4	Blo	Tim 54000H	B	F	6.16	36.0	G†	Tim 12703H	Ros	120	79	4100
F. W. D. BTL	3900	120	....	P 36x8	P 36x8	Wis SU	4-4x5	25.6	H	PC	Non	Per	Zen	V	Eis	N-E	B-L	B-L	A	7	Blo	Own HT	B	F	6.95	84.7	B	Own H	Ros	115	80	6000
F. W. D. H6	3425	133	160	P 34x7	P 34x7	Wau XL	6-3½x4½	29.4	L	PC	Wau	Per	Zen	V	N-E	N-E	D. B-L	B-L 51	U	4	Blo	Own	B	F	6.52	35.0	H	Own	Ros	118	87	5500
Garford 40	3240	168	185	P 36x6	DP36x6	Bud DS6	6-3⅝x5	31.5	L	PC	Non	Lon	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Blo	Tim 63702	W	F	6.5	34.8	G	Tim 14704H	Han	144	90	4900
Garford S11	2030	162	....	P 32x6	DP32x6	Bud HS6	6-3⅜x4½	27.3	L	PC	Non	Lon	Zen	V	A-L	A-L	P. B-L	B-L 20	U	4	Blo	Tim 54000	S	F	5.8	29.2	G	Col 5530	Han	133½	83	4500
Gen. Mot. T30-3001	1530	136°	164	P 32x6	P 36x8	Buick	6-3⅛x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.-	Mun	U	4	Spi	Eat 1616	S	½	5.63	28.60	G*	Own	Jac	101	58	4032
Gen. Mot. T30-3002	1505	136°	164	P 32x6	DP32x6	Buick	6-3⅛x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.-	Mun	U	4	Spi	Eat 1616	S	½	5.63	28.60	G*	Own	Jac	101	58	3957
Gen. Mot. T42-4001	1885	136°	175	P 32x6	P 38x9	Buick	6-3⅜x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Own	S	½	6.57	33.38	G*	Own	Jac	101	58	4485
Gen. Mot. T42-4002	1790	136°	175	P 32x6	DP32x6	Buick	6-3⅜x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Own	S	½	6.57	33.38	G*	Own	Jac	101	58	4435
Gen. Mot. T42-4003	1685	136°	175	B 7.00/20	P 36x8	Buick	6-3⅜x4⅝	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Own	S	½	6.57	33.38	G*	Own	Jac	101	58	4305
Gotfredson RB-46	....	Opt....	....	P 32x6	DP32x6	Own	6-3¾x4½	33.7	L	FP	Non	McC	Str	O	D-R	D-R	D. B-L	B-L 35-4	U	4	Spi	Tim 54000H	B	F	Opt	Opt	I	Tim 12703-H	Ros	....	....	4740
†G-P 42-6	....	154	160	B 7.50/20	B7.50/20	Wau 6TL	6-3⅜x4¾	27.3	L	PC	Non	Chi	Str	V	A-L	A-L	D.B-L	B-L 35	U	4	M.M.	Tim 54200	S	F	5.83	31.4	I	Tim 12703- H	Ros	....	....	4500
Gramm C-160	1895	160°	196	P 32x6	DP32x6	Lyc TS	6-3⅞x5	36.2	L	PC	Non	Per	Zen	O	A-L	A-L	D. Jon	Cov W4C	U	4	Blo	Tim 56000	B	F	4.44	28.41	I†	Col 4003	Ros	120	77¼	4820
Gramm-Bernstein 115S	....	149½°	196	P 30x5	P 30x5	Con 15C	6-3⅜x4⅝	27.3	L	PC	Non	Own	Zen	G	A-L	A-L	D. Ful	Ful SU12	U	3	Blo	Cla B504	B	½	6.38	25.52	B*	Shu 5405	Ros	127	73½	3750
Gramm-Bernstein 115	....	146°	160	P 30x5	P 30x5	Lyc C4W	4-4x5	25.6	L	PC	Non	Own	Zen	G	A-L	A-L	D. Ful	Ful SU12	U	3	Blo	Cla B504	B	½	6.38	25.52	B*	Shu 5405	Ros	127	73⅛	3650
Gramm-Bernstein B6	....	144	....	P 32x6	DP32x6	Con 16C	6-3⅜x4⅝	27.3	L	PC	Non	You	Zen	V	A-L	A-L	D.Ful	Ful KU10	U	4	Blo	Tim	B	F	5.83	37.89	G†	Tim	Ros	120½	73¾	4590
Guilder C6	2150	148	168	P 32x6	DP32x6	Her WXA2	6-3½x4½	29.4	L	PC	Mon	G&O	Zen	V	D-R	D-R	D B-L	B-L	U	4	Spi	Tim 54000	S	F	Opt	Opt	....	Tim 12703	Ros	....	....	4650
Guilder E	3150	152	....	S 34x4	S 36x8	Bud KBU-1	4-4x5¼	25.6	L	PC	Pie	G&O	Zen	G	Eis	D-R	D. B-L	B-L 51	U	4	Spi	Tim 65000	R	F	7.75	41.0	A*	Shu 5410	Ros	....	....	5450
Hahn 37H	....	153	....	P 30x5	DP30x5	Con 15C	6-3⅜x4⅝	27.3	L	FP	Non	Chi	Zen	V	A-L	A-L	D. B-L	B-L 20	U	4	Blo	Tim 54000H	B	F	....	....	I	Tim 12703H	Ros	120	....	4600

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Trade Name and Model	General					Engine								Electrical System		Clutch	Gearset			Universals (Make)	Rear Axle			Gear Ratios		Brakes, Location	Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase		Chassis Weight (lbs.) (stripped)
	Chassis Price	Standard Wheelbase (inches)	Maximum Wheelbase furnished	Tire Size: Front (inches)	Tire Size: Rear (inches)	Make and Model	Number of Cylinders Bore and Stroke	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)	Fuel System: Carburetor (Make)	Fuel System: Fuel Feed	Ignition System (Make)	Generator and Starter (Make)	Type and Make	Make and Model	Location	No. of Forward Speeds		Make and Model	Final Drive	Type	Total Reduction in High	Total Reduction in Low				Cab to rear of frame	Cab to rear axle	
2½ Ton—Cont'd																															
Corbitt 15B6		174	220	P 34x7	DP34x7	Con 16-R	6-4x4½	38.4	H	FP	Non	Per	Zen	V	D-R	D-R	D. B-L	B-L 51	U	4	Spi	Tim 58000-H	Δ	F	Opt	Opt	A‡	Tim 15733- H	Ros	144	88	5870
Corbitt 15W6		183	224	P 34x7	DP34x7	Con 16-R	6-4x4½	38.4	H	FP	Non	Per	Zen	V	D-R	D-R	D, B-L	B-L 51	U	4	Spi	Tim 65001-H	W	F	Opt	Opt	A‡	Tim 15733- H	Ros	144	97	6160
Defiance OX		175	240	P 32x6	DP32x6	Con 6B	6-3⅜x5	33.7	L	PC	Non	Own	Zen	V	A-L	A-L	D. Ful	Ful	U	4	Spi	Wis	R	F	7.25	Opt	A	Shu	Ros	160	110	6400
Defiance OXH		175	240	P 32x6	DP32x6	Her WXC	6-4x4½	38.4	L	FR	Non	Own	Zen	V	A-L	A-L	D. Ful	Ful	U	4	Spi	Wis	R	F	7.25	Opt	A	Shu	Ros	160	110	6400
Denby 43		155		S 36x4	S 36x8	Her O	4-4x5	25.6	L	PC		Lon	Zen	G	Eis		D. Ful	Ful	U	4	U-P	Cla	I	D	9.00	39.12		Con	Ros			4925
Denby 43		155		S 36x4	S 36x8	Her O	4-4x5	25.6	L	PC	Han	G&O	Zen	V	A-L	A-L	D. Cov	Cov	U	4	Spi	Tim 58000H	S	F	7.12	36.9	G†‡	Shu 5582B	Ros		84⅝	5600
Diamond 551	2250	168°	186¼	P 32x6	DP32x6	Her WXC	6-4x4½	38.4	L	PC	Han	G&O	Zen	V	A-L	A-L	D. Cov	Cov	U	4	Spi	Tim 65001H	W	F	9.33	48.5	G†‡	Shu 5582B	Ros			5900
Diamond 503	2660	164	200	P 34x7	DP34x7	Her WXC	6-4x4½	38.4	L	PC	Han	G&O	Zen	V	A-L	A-L	D. Cov.	Cov	U	4	Spi	Wis 6537B-L	R	F			G†‡	Shu 5582B	Ros			5900
Diamond 506	2820	172½	238½	P 34x7	DP34x7	Her WXC	6-4x4½	38.4	L	PC	Han	G&O	Zen	V	A-L	A-L	D. Cov	Cov W4C	U	4	Pet	Tim 54000H	B	F			G	Tim 14703H	Ros			5000
*Eagle 6-25		176		P 30x5	P 30x5	Con 18E	6-3½x4	27.0	L	PC	Opt	Per	Zen	V	D–R	D–R	D. B-L	B-L 35	U	4	Spi	Tim 58000H	W	F	4.88	20.56	G†	Tim 14700H	Ros	167⅛	99½	5250
Fageol 250	3100	178°	196	P 32x6	DP32x6	Wau XK	6-3¾x4½	33.7	L	PC	Non	Own	Zen	V	D-R	D-R	P. B&B	Own	A	4	Pet	Tim 58000H	B	F	6.83	41.27	G†‡	Cla F304	Ros	119	71	4950
Federal A6T	2185	151	176	P 32x6	DP32x6	Con 16C	6-3½x4½	27.3	L	PC	K.P.	Lon	Zen	V	D-R	D-R	P. B&B	Own	A	4	Pet	Tim 65001H	W	F	6.75	40.77	G†‡	Own	Ros	119	71	4950
†Federal A6TW	2360	151	176	P 32x6	DP32x6	Con 16C	6-3½x4½	27.3	L	PC	K.P.	Lon	Zen	V	D-R	D-R	P. B&B	Own	A	4	Pet	Tim 58000H	B	F	5.57	36.30	G†‡	Own	Ros	119	81	6600
*Federal 2½-3 Ton T10B	2740	165	189	P 34x7	DP34x7	Con 16R	6-4x4½	38.4	I	PC	K.P	Lon	Zen	V	D-R	D-R	P. B&B	Own	A	4	Pet	Tim 65001H	W	F	6.75	43.98	G†‡	Own	Ros	119	81	6600
Federal 2½-3Ton-T10W	2915	165	189	P 34x7	DP34x7	Con 16R	6-4x4½	38.4	I	PC	K.P	Lon	Zen	V	D-R	D-R	P. B&B	Own	A	4	Pet	Tim 58000H	B	F	6.83	42.3	G†	Tim 14703H	Ros	120	80	4800
Fisher Heavy Duty		155	190	P 32x6	DP32x6	Con 16-R	6-4x4½	38.4	H	FP		Lon	Str	V	A-L	A-L	D. B-L	B-L 35A	A	4	Blo	Tim 65000H	W	F	6.83	42.3	G†	Tim 15733H	Ros	120	80	5150
Fisher Heavy Duty		155	190	S 36x5	S 36x8	Con 16-R	6-4x4½	38.4	H	FP		Lon	Str	V	A-L	A-L	D. B-L	B-L 35A	A	4	Blo	Own	B	F	6.95	84.7	B	Own	Ros	115	80	6000
F. W. D -HH6		133	160	P 36x8	P 36x8	Wau XL	6-3½x4½	29.4	L	PC	Wau	Per	Zen	Y	N-E	N-E	D. B-L	B-L	A	7	Blo	Own	B	F	8.5	63.0	G *	Tim 15733H	Han	156	97½	7000
Garford 60	4580	175	192	P 36x6	DP36x6	Bud BUS	6-4x5½	38.4	L	PC	Bud	Lon	Zen	V	A-L	A-L	D. B-L	B-L 51–5	U	5	Blo	Tim 65706DH	W	F	8.5	63.0	G *	Tim 15733H	Han	156	97½	7000
Garford 40	3240	168	185	P 36x6	DP36x6	Bud DS6	6-3⅝x5	31.5	L	PC	Non	Lon	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Blo	Tim 63702	W	F	6.5	34.8	G	Tim 14704H	Han	144	90	5100
Gen. Mot. T42-4001	1885	136°	175	P 32x6	P 38x9	Buick	6-3⅛x4½	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Own	S	½	6.57	33.38	G*	Own	Jac	101	58	4485
Gen. Mot. T42-4002	1790	136°	175	P 32x6	DP32x6	Buick	6-3⅛x4½	26.3	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Own	S	½	6.57	33.38	G	Own	Jac	101	58	4435
Gotfredson RW44		165	196	P 34x7	P 34x7	Bud KBU-I	4-4x5¼	25.6	L	PC	Non	MeC	Zen	V	D-R	D-R	D. B-L	B-L 35	U	4	Spi	Tim 63721H	W	F	7.66	40.98	G	Tim 12703H	Ros			5050
Gotfredson RW-46		Opt.		P 32x6	DP32x6	Own	6-3⅜x4½	33.7	L	FP	Non	Lon	Str	O	D-R	D-R	D. B-L	B-L 35-4	U	4	Spi	Tim 63702H	W	F	Opt	Opt	I	Tim 12703H	Ros			4740
Gramm D-160	2195	160°	196	P 32x6	DP32x6	Lyc TS	6-3⅞x5	36.2	L	PC	Non	Per	Zen	O	A-L	A-L	D. Jon	Cov W4C	U	4	Blo	Wis 4626-L	R	F	5.0	32.0	I†	Col 5500	Ros	120	77¼	5100
Gramm-Bernstein 125		144°	160	S 36x4‡	DS36x4	Con S4	4-4½x4½	28.9	L	FP	Non	Own	Str	G	Eis	A-L	D. Ful	Ful GU	U	4	Own	Wis	W	F	8.66	41.57	*	Shu 5410	Ros	125	76¼	5440
Gramm Bernstein B6		144		P 32x6	DP32x6	Con 16C	6-3⅜x4½	27.3	L	PC	Non	You	Zen	V	A-L	A-L	D. Ful	Ful KU10	U	4	Blo	Tim	B	F	5.83	37.89	G†	Tim	Ros	120½	73¾	4590
Gramm Bernstein B6		144		P 32x6	DP32x6	Con 16C	6-3⅜x4½	27.3	L	PC	Non	Per	Zen	G	Bos-R	Non	D. B-L	B-L 55	A	7	Spi	Tim 65706D	W	F	Opt	Opt	A*	Tim 15300	Ros	128½	76¼	5865
Gramm-Bernstein C		144°	166	S 36x4‡	DS36x4‡	Con K4	4-4½x5¼	27.2	L	FP	Pie	Own	Str	V	Eis	A-L	D. Ful	Ful GOG	A	8	Blo	Wis 9018	W	F	7.66	76.6	B*	Shu 5550	Ros	128½	77¼	5920
Gramm-Bernstein C6		150°	201	S 36x4‡	DS36x4‡	Con 6B	6-3¾x5	33.7	L	FP	Pie	Own	Str	V	Eis	A-L	D. Ful	Ful GOG	A	8	Blo	Wis 9018	W	F	7.25	68.6	B*	Shu 5550	Ros	179	118	5800
Guilder E6	3250	172	184	P 32x6	DP32x6	Her WXB	6-3¾x4½	33.7	L	PC	Mon	G&O	Zen	V	D-R	D-R	D B-L	B-L 35	U	4	Spi	Tim 5800°	S	F	Opt	Opt	. . .	Tim 14703	Ros			6000
*Harvey WG6	3500	185	185	P 36x8	DP36x8	Bud DW6	6-3¾x5	33.7	L	PC	Bud	Own	Str	G	Bos-R	Non	D. B-L	B-L 55	A	7	Spi	Tim 65706D	W	F	Opt	Opt	A*	Tim 15300	Ros			6000
*Harvey WG	3500	150°	185	P 36x8	DP36x8	Bud EBUI	4-4½x5½	28.9	L	PC	MeC	Own	Zen	G	Bos-R	N-E	D. Ful	Ful HU	U	4	Pie	Tim 65706D	W	F	Opt	Opt	A*	Tim 15300	Ros			6050
Hawkeye 50-75		210°	225	S 36x5‡	S 36x8	Bud BA6	6-4½x5½	40.8	L	PC	Non	Per	Zen	G	Bos-R	N-E	D. Ful	Ful HU	U	4	Pie	Wis 1418	R	F	6.86	37.4	A‡	Shu 5550	Ros	205	131	5900
Hawkeye 50-48		Opt	185	S 36x5‡	S 36x8	Bud EBUI	4-4½x5½	28.9	L	PC	Sim	Per	Zen	G	Bos-R	N-E	D. Ful	Ful HU	U	4	Pie	Wis 8800A	R	F	8.6	54.2	A*	Shu 5550	Ros	179	106	5400
Hawkeye 50-60		197	197	S 36x6	DS38x7	Bud DW6	6-3¾x5	33.7	L	PC		Per	Zen	G	N-E	N-E	D. Ful	Ful HU	U	4	Pie	Wis 1418	R	F	8.00	50.2	A‡	Shu 5550	Ros	179	118	5800
Hendrickson ST6	3350	Opt.	Opt.	P 34x7	DP34x7	Bud DW6	6-3¾x5	33.7	L	PC	Bud	Chi	Zen	V	A-L	A-L	D. Ful	Ful MGOG	A	4	Spi	Tim 58000	B	F	Opt	Opt	G†‡	Tim 15733H	Ros			6500
Hug 26		150	195	P 32x6	DP32x6	Bud DW6	6-3¾x5	33.7	L	PC	Bud	You	Zen	V	A-L	D-R	D. B-L	B-L 35	U	4	Blo	Wis 4610	R	F	5.98	31.99	A	Shu 550	Ros	Var	Var	5645
Hug 81		127	127	P 36x6	DP36x6	Bud KBU-I	4-4x5¼	25.6	L	PC	Bud	You	Zen	V	Eis	D-R	D. B-L	B-L 51	U	5	Blo	Wis 8800B	R	F	7.85	42.05	A	Shu 550	Ros	78	57½	5890
Hug 84		127	127	P 36x6	DP36x6	Bud KBU-I	4-4x5¼	25.6	L	PC	Bud	You	Zen	V	Eis	D-R	D. B-L	B-L 51	U	5	Blo	Wis 8800B	R	F	7.85	46.85	A	Shu 5550	Ros	78	57½	6088
*Indiana 115A		132	132	P 32x6	DP34x7	Her OXCP	4-4½x5	28.9	L	PC	Non	Lon	Str	G	Eis	A-L	P. B&B	B-L 35	U	4	Spi	Cla 720	S	½	8.00	42.8	B*	Shu 5410	Ros	88	58	4970
Indiana 127S		162½		S 36x5	S 36x10	Her L	4-4½x5¾	32.4	L	PC	Pie	Lon	Str	V	Eis	A-L	P. B&B	B-L 55	U	4	Spi	Cla 720	S	½	8.00	42.8	A*	Shu 5550	Ros	138	83	6300
Indiana 127W		162½		S 36x5	S 36x10	Her L	4-4½x5¾	32.4	L	PC	Pie	Lon	Str	V	Eis	A-L	P. B&B	B-L 55	U	4	Spi	Tim 65700	W	F	8.00	42.8	A*	Shu 5550	Ros	138	83	6300
*Indiana 615A		136	136	P 32x6	DP34x7	Wis Y	6-3⅜x5	27.3	H	PC	K.P.	Lon	Str	G	Eis	A-L	P. B&B	B-L 35	U	4	Spi	Cla 720	S	½	8.00	42.8	B*	Shu 5410	Ros	88	58	5160
Int. Harvester HS54		148°	200	S 36x5‡	S 36x8‡	Ha S 151	4-4½x5½	28.9	H	PC	Ha S	Own	Zen	G	Bos-R	D-R*	P. Own	Own	U	5	Own	Eat 54	R	F	6.85	60.49	E*	Eat 54F	Own	106½	73¼	7500
Int. Harvester HS54C		148°	200	S 36x5‡	S 36x10‡	Ha S 151	4-4½x5½	28.9	H	PC	Ha S	Own	Zen	G	Bos-R	D-R*	P. Own	Own	U	5	Own	Own	C	D	7.22	63.75	E*	Eat 54F	Own	106½	73¼	8165
Kenworth 145	3250	158½	184½	P 34x7	DP34x7	Her WXC	6-4x4½	38.4	L	PC	Han	Per	Zen	V	A-L	D-R	D. B-L	B-L 35	U	4	Spi	Tim 58001-H	S	F	6.83	36.6	G†	Tim 14703-H	Ros	126	87	5500
King Zeitler 45		156°		S 36x5‡	S 36x8‡	Con 16C	4-4½x4½	28.9	L	FP	Han	Chi	Str	G	Bos-R	A-L‡	D. B-L	B-L 35	U	4	Blo	Tim 65000D	W	F	9.25	49.5	A*	Tim 15302	Ros			5400
Kissel		168		S 36x4	S 36x8‡	Own 50000	4-4½x5½	28.9	L	SP	Pie	MeC	Str	V	Eis	D-R‡	D. W-G	Ful G7	A	4	Spi	Tim 6566	W	F	8.50	40.8	A*	Tim 1544B	Ros			5100
Kleiber Speed	2950	180	180	P 32x6	DP32x6	Bud	6-3¾x5	33.7	L	PC	Non	Own	Str	V	D-R	D-R	D. B-L	B-L 55	U	4	Spi	Tim 63720H	W	F	6.25	33.4	A†	Tim 14703H	Ros	144	97	5100
Kleiber Black Panther	3500	190	190	P 34x7	DP34x7	Cont	6-4x4½	38.4	H	FP	Non	Own	Str	V	D-R	D-R	D. B-L	B-L 51	U	5	Spi	Tim 58000H	B	F	6.83	. . .	G	Tim 14703H	Ros	164	104	6050
Lange O	3950	145¾°	211¼	P 34x7	DP34x7	Her YXB	6-4x4¾	38.4	L	PC	Pie	Mod	Str	V	A-L	A-L	D. B-L	B-L 51	U	4	Spi	Wis 8817	R	F	7.29	39.1	B	Shu 510	Ros	106	65	5985
Larrabee 50		177	200	P 32x6	P 32x6	Con 16R	6-4x4½	38.4	H	PC	Non	Per	Zen	G	D-R	D-R	D. B-L	B-L	U	4	Spi	Wis	R	F	Opt	Opt	E†	Tim	Ros			
LeMoon HB25	2900	166	182	S 34x5	S 34x8	Wau 6XK	6-3¾x4½	33.7	. .	FP	Non	Chi	Str	G	A-L	A-L	D. B-L	B-L 35	U	4	Spi	Tim 65000H	W	F	8.5	45.47	G	Tim 15733H	Ros	138	90	5500
Le Moon HB26	3250	166	182	P34x7	DP34x7	Wau 6XK	6-3¾x4½	33.7	. .	FP	Non	Chi	Str	G	A-L	A-L	D. B-L	B-L 35	U	4	Spi	Tim 65000H	W	F	7.25	38.78	G	Tim 15733H	Ros	138	90	5500
Le Moon HB27	3600	166	182	P 34x7	DP34x7	Wau 6KU	6-4¼x4¼	43.3	. .	FP	Wau	Chi	Str	G	A-L	A-L	D. B-L	B-L 35	U	4	Spi	Tim 65000H	W	F	7.25	38.78	G	Tim 15733H	Ros	138	90	5700
Luedinghaus		145°	172	S 36x5	S 36x8‡	Wau FU	4-4x5¾	25.6	L	PC	Wau	Own	Zen	. .	Eis	Non	D. Ful	Ful GU14	U	4	Spi	Tim 65000D	W	F	6.00	32.10	G	Tim 15733H	Ros	138	90	5700
Maccar 56		153	194	P 34x7	DP34x7	Bud DW6	6-3¾x5	33.7	L	PC	Bud	Per	Str	V	D-R	D-R	D. B-L	B-L 51	U	4	Spi	Wis 6770L	R	F	7.00	. . . .	A*	Shu	Ros	120	77	4900
*Mack AB	3500	146½	164½	S 36x4‡	DS36x4‡	Own AB	4-4¼x5	28.9	L	PS	Own	Own	Str	G	Bos-R	N-E‡	D. Own	Own AB	U	4	Spi	Own AB	C	D	*8.87	43.0*	B*	Own AB	Own	144°	91	5500
*Mack AB	3950	164½°	. . . .	S 36x4‡	DS36x4‡	Own AB	4-4¼x5	28.9	L	PS	Own	Own	Str	G	Bos-R	N-E‡	D. Own	Own AB	U	4	Spi	Own AB	R	F	*9.25	44.9*	B*	Own AB	Own	144°	91	6050
Noble 156B		176	203	P 34x7	DP34x7	Bud DW6	6-3¾x5	33.7	L	PC	Bud	Chi	Str	V	A-L	A-L	D. Ful	Ful MGU	U	4	Blo	Tim 58000H	S	F	6.83	44.39	G†	Tim 15733H	Ros	147½	86½	5625
Noble 156W		176	203	P 34x7	DP34x7	Bud DW6	6-3¾x5	33.7	L	PC	Bud	Chi	Str	V	A-L	A-L	D. Ful	Ful MGU	U	4	Blo	Tim 65000H	W	F	6.0	39.0	G†	Tim 15733H	Ros	147½	86½	5950
Oneida B-9		144		P 32x6	P 34x7	Wau V	4-4x5	25.6	L	PS	Non	Per	Str	. .	A-L	A-L	Ful	Ful KU10	U	4	Blo	Tim 5620	S	F	6.42	. . . .	A	Shu 350	Ros			4800
†Omort 250		124	148	P 32x6	DP32x6	Her OX	4-4x5	25.6	L	PC	Non	You	Zen	V	A-L	A-L	D. Ful	Ful MGU-14	U	4	Blo	Wis 6617	R	F	5.33	34.64	A	Shu 5510	Ros	84	49	5200
Oshkosh L	3925	146	165	P 36x8	P 36x8	Her WXC	6-4x4½	38.4	L	PC	Her	Own	Zen	V	L-N	L-N	D. B-L	B-L	U	4	Blo	Own L	R	F	7.4	39.6	B	Own L	Han	114½	83½	7400
*Relay 60	4555	175	192	P 36x6	DP 36x6	Bud BUS	6-4x5½	38.4	L	PC	Bud	Lon	Zen	V	A-L	A-L	D. B-L	B-L 51-5	U	5	Blo	Own 60	R	F	7.88	58.5	G	Tim 15733H	Han	156	97½	7350
*Relay 40	3275	168	185	P 36x6	DP36x6	Bud DS6	6-3⅝x5	31.5	L	PC	Non	Lon	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Blo	Own 30	R	F	6.45	34.5	G	Tim 14704H	Han	144	90	5700
*Relay 50	4000	161	. . . .	P 36x6	DP38x7	Bud DW6	6-3¾x5	33.7	L	PC	Non	Lon	Zen	V	A-L	A-L	D. B-L	B-L 51-5	U	5	Blo	Own 60	R	F	7.88	58.5	G	Tim 14704H	Han	144	82	7000
Republic F1		155°	. . . .	P 32x6	DP32x6	Lyc 4SL	6-3¼x4½	25.3	L	PC	Non	Own	Zen	V	A-L	A-L	D. Ful	Ful	U	4	U-M	Eat	B	½	6.62	44.0	G*	Eat	Han	135½	80	4650
Republic H1		163°	. . . .	P 34x7	DP34x7	Lyc TS	6-3⅞x5	36.2	L	PC	Non	Own	Zen	V	A-L	A-L	D. Ful	Ful	U	4	U-M	Eat	B	¼	5.5	35.75	G*	Eat	Han	147¾	84	5750
Republic 60		163°	. . . .	P 32x6	DP32x6	Lyc TF	6-3⅝x5	31.5	L	PC	Non	Own	Zen	V	A-L	A-L	D. Ful	Ful	U	3	U-M	Eat	B	¼	5.5	22.0	E*	Eat	Han	147¾	84	4600
Republic 58		122	. . . .	P 32x6	DP32x6	Lyc C4	4-4x5	25.6	L	PC	Non	Own	Zen	V	A-L	A-L	D. Ful	Ful	U	3	U-M	Eat	B	¼	6.87	27.5	B*	Eat	Han	83	46½	4300

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Trade Name and Model	General: Chassis Price	Standard Wheelbase (inches)	Maximum Wheelbase furnished	Tire Size: Front (inches)	Tire Size: Rear (inches)	Engine: Make and Model	Engine: Number of Cylinders Bore and Stroke	Engine: N.A.C.C. Rated H.P.	Engine: Valve Arrangement	Engine: Oiling System	Engine: Governor (Make)	Engine: Radiator (Make)	Engine: Fuel System: Carburetor (Make)	Engine: Fuel System: Fuel Feed	Electrical System: Ignition System (Make)	Electrical System: Generator and Starter (Make)	Clutch: Type and Make	Gearset: Make and Model	Gearset: Location	Gearset: No. of Forward Speeds	Universals (Make)	Rear Axle: Make and Model	Rear Axle: Final Drive	Rear Axle: Type	Gear Ratios: Total Reduction in High	Gear Ratios: Total Reduction in Low	Brakes, Location	Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase: Cab to rear of frame	Standard Wheelbase: Cab to rear axle	Chassis Weight (lbs.) (stripped)
3 Ton—Cont'd																																
Gotfredson RB-56		Opt.		P 34x7	DP34x7	Own	6-4x4½	38.4	L	FP	Pie	Lon	Str	O	D-R	D-R	D. B-L	B-L 51-5	U	5	Spi	Tim 56000	B	F	Opt	Opt	I	Tim 14703H	Ros			
Gotfredson RW-56		Opt.		P 34x7	DP 34x7	Own	6-4x4½	38.4	L	FP	Pie	Lon	Str	O	D-R	D-R	D. B-L	B-L 51-5	U	5	Spi	Tim 65001HP	W	F	Opt	Opt	I	Tim 14703H	Ros			
†G-P 47-6		154	175	B8.25/20	DB8.25/20	Lyc TH	6-3½x5	29.4	L	PC	Non	Chi	Str	V	A-L	A-L	D. B-L	B-L 51-5	U	5	M.M.	Tim 56200	S	F	6.14	32.8	I	Tim 14703- H	Ros			4900
†G-P 47-8		154	184	B8.25/20	DB8.25/20	Lyc HD	8-3¼x4½	33.8	L	PC	Non	Chi	Str	V	A-L	A-L	D. B-L	B-L 51-5	U	5	M.M.	Tim 56200	S	F	6.14	32.8	I	Tim 14703- H	Ros			4950
Gramm E-150	2595	150°	196	P 34x7	DP34x7	Lyc TS	6-3½x5	36.2	L	PC	Non	Per	Zen	O	A-L	A-L	D. Jon	Cov W4C	U	4	Blo	Wis 6617B	R	F	5.33	34.0	H*	Col 5500	Ros	127	74¼	5200
Gramm EY-190	3535	190	190	P 32x6	DP32x6	Con 20-R	6-4½x4¾	40.8	I	PC	Non	Per	Zen	O	A-L	A-L	D. Ful	Ful MGU-14	U	4	Blo	Wis 4657B	R	F	4.00	26.0	H‡*	Eat 423	Ros	156	90	6750
Gramm 35	3595	153°	200	S 36x5‡	S 36x10‡	Lyc TS	6-3½x5	36.2	L	PC	Han	Own	Zen	V	A-L	A-L	D. Ful	Ful H	A	8	Blo	Wis 8800	R	F	6.33	70.0	B*	Wis 30	Ros	138	83¾	7100
Gramm 38 low bed	3595	153°	200	S 36x5‡	S 36x10‡	Lyc TS	6-3½x5	36.2	L	PC	Han	Own	Zen	V	A-L	A-L	D. Ful	Ful MGU	U	4	Blo	Wis 67317	R	F	6.9	33.1	B*	Shu 5550B	Ros	138	83¾	7100
Gramm-Bernstein A		162		P 36x8	DP36x8	Con 18R	6-4x4½	38.4	H	PC	Han	You	Zen	V	A-L	A-L	D. B-L	B-L 55 Max	A	7	Blo	Tim 65706H	W	F	7.25	68.8	G†‡	Tim 15733H	Ros	134	81¼	7450
Gramm-Bernstein 30		150	168	S 36x5	DS36x5	Con L4	4-4½x5½	32.4	L	PC	Pie	Own	Str	G	Eis	A-L	D. Ful	Ful	U	4	Blo	Tim	B	F	7.75	63.7	B*	Shu	Ros	130	81¾	6560
Gramm-Bernstein B6X		144		P 32x6	DP32x6	Con 17C	6-3¾x4½	27.3	L	PC	Non	You	Zen	V	A-L	A-L	D. Ful	Ful	U	4	Blo	Tim	W	F	6.16	40.04	G†	Tim	Ros	120½	73¾	4700
Gramm-Bernstein B6X		144		P 32x6	DP32x6	Con 16C	6-3¾x4½	27.3	L	PC	Non	You	Zen	V	A-L	A-L	D. Ful	Ful	U	4	Blo	Tim	W	F	6.5	42.25	G†	Tim	Ros	120½	73¾	4750
Gramm-Bernstein C		144°	166	S 36x4‡	DS36x4‡	Con K4	4-4½x5¼	27.2	L	FP	Pie	Own	Str	V	Eis	A-L	D. Ful	Ful GOG	A	8	Blo	Wis 9018	W	F	8.66	76.6	B	Shu 5550	Ros	128½	76¼	5865
Gramm-Bernstein C6		150°	201	S 36x4‡	DS36x4‡	Con 6B	6-3¾x5	33.7	L	FP	Pie	Own	Str	V	Eis	A-L	D. Ful	Ful GOG	A	8	Blo	Wis 9018	W	F	7.75	68.6	B*	Shu 5550	Ros	128½	77⅛	5920
Guilder H	3750	Opt		S 36x5	DS36x5‡	Bud EBU-I	4-4½x5½	28.9	L	PC	Pie	G&O	Zen	G	Eis	Bos-A*	D. B-L	B-L 51	U	4	Spi	Tim 65000	W	F	7 75	42.0	..	Shu 5550	Ros			5600
Guilder H6	3850	172	184	P 34x7	DP34x7	Her WXC	6-4x4½	38.4	L	PC	Mon	G&O	Zen	V	D-R	D-R	D. B-L	B-L 51	U	4	Spi	Tim 65000	W	F	Opt	Opt	B	Shu 5550	Ros			6150
Hahn 39H		164		P 32x6	DP32x6	Con 16R	6-4x4½	38.4	H	FP	Non	Chi	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Blo	Tim 56000H	B	F			I	Tim 14703 H	Ros	120		5800
Hahn 39HL		174	190	P 32x6	DP32x6	Con 16R	6-4x4½	38.4	H	FP	Non	Chi	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Blo	Tim 56000H	B	F			I	Tim 14703H	Ros	168		6700
Hendrickson T-6	3800	Opt.	Opt.	P 36x8	DP36x8	Bud DW6	6-3¾x5	33.7	L	PC..	Bud	Chi	Zen	V	A-L	A-L	D. Ful	Ful MGOG	A	4	Spi	Tim 6570uA	W	F	Opt	Opt	G†‡	Tim 15733H	Res			7000
Hug 40		150°	195	P 34x7	DP34x7	Bud DW6	6-3¾x5	33.7	L	PC	Bud	You	Zen	V	A-L	D-R	D. Ful	Ful GOG	A	8	Blo	Wis 6617	R	F	6.35	37.84	G	Shu 5572	Ros	Var	Var	6100
Hug 41		150°	195	P 34x7	DP34x7	Bud DW6	6-3¾x5	33.7	L	PC	Bud	You	Zen.	V	A-L	D-R	D. B-L	B-L 51-5	U	5	Blo	Wis 6600	R	F	7.75	46.9	A	Shu 550	Ros	Var	Var	6200
Hug 67		120		P 34x7	DP34x7	Bud H298	6-3¾x4½	33.7	L	PC	Non	You	Zen	V	A-L	D-R	D. B-L	B-L 51-5	U	5	Blo	Wis 8800B	R	F	7.85	46.85	A	Shu 5550	Ros	96½	64	.....
Hug 86		127	127	P 36x6	DP36x6	Bud DW6	6-3¾x5	33.7	L	PC	Bud	You	Zen	V	R-Bos	D-R	D. B-L	B-L 51	U	5	Blo	Wis 8800B	R	F	7.85	46.85	A	Shu 5550	Ros	78	57½	6410
Hug 486		150	195	P 34x7	DP34x7	Bud DW6	6-3¾x5	33.7	L	PC	Bud	You	Zen	V	A-L	D-R	D. B-L	B-L 51	U	5	Blo	Wis 8800B	R	F	7.85	46.85	A	Shu 5550	Ros	81	61	6430
*Indiana 126		162°	198	S 36x5	S 36x10	Her L	4-4½x5¾	32.4	L	PC	Pie	McC	Str	V	Eis	A-L†	P. B&B	B-L 55 Max	A	7	Spi	Tim 65704SP	W	F	7.75	73.62	B*	Shu 5550	Ros	138	83	7400
*Indiana 126		168°	204	S 36x5	S 36x10	Wis H	6-4x5	38.5	H	FP	K.P.	Lon	Str	V	Eis	A-L†	P. B&B	B-L 55 Max	A	7	Spi	Tim 65704SP	W	F	7.75	73.6	B*	Shu 5550	Ros	132	83	7625
Indiana 626		168¾°	216¾	P 32x6	P 38x9	Wis H	6-4x5	38.4	H	FP	K.P.	Lon	Str	V	A-L	A-L	P. B&B	B-L 55	U	4	Spi	Cla 720	S	½	7.00	42.8	B*	Shu 5550	Ros	138	83	6500
Indiana 627		168¾°	216¾	P 32x6	P 38x9	Her WXC	6-4x4½	38.4	L	PC	Han	Lon	Str	V	A-L	A-L	P. B&B	B-L 55	U	4	Spi	Wis 1228	R	F	7.9	42.3	B‡	Shu 5550	Ros	162	107	7000
Indiana 627W		180¾	216¾	P 32x6	P 38x9	Her WXC	6-4x4½	38.4	L	PC	Han	Lon	Str	V	A-L	A-L	P. B&B	B-L 55	U	4	Spi	Cla 720	S	½	5.67	30.33	B*	Shu 5550	Ros	162	107	6585
*Indiana 628		216¾	216¾	P 34x7	DP34x7	Wis H	6-4x5	38.4	H	FP	K.P.	Lon	Str	V	Eis	A-L†	P. B&B	B-L 55	U	4	Spi	Cla 720	S	½	8.00	42 8	A*	Shu 5550	Ros	138	83	6350
Indiana 127		162°	198½	P 36x5	P 36x10	Her L	4-4½x5¾	32.4	L	PC	Pie	Lon	Str	V	Eis	A-L*	P. B&B	B-L 51	U	5	Spi	Wis 1228	R	F	7.32	43.62	B‡	Shu 5550	Ros	100	66	7000
Indiana 127AW		150	150	P 34x7	DP34x7	Her K	4-4¼x5¾	28.9	L	PC	Pie	Lon	Str	V	Eis	A-L*	P. B&B	B-L 51	U	5	Spi	Wis 1228	R	F	7.32	43.62	B‡	Shu 5550	Ros	100	66	7205
Indiana 627AW		156	156	P 34x7	DP34x7	Wis H	6-4x5	38.4	I	FP	K.P.	Lon	Str	V	D-R	D-R	P. Own	Own	U	5	M.M.	Eat 530F	S	½	7.16	64.73	H*	Eat 2112	Ros	115	72½	5606
†Int. Harvester A-5		156	210	P 34x7	DP34x7	Own A	6-3½x4½	31.5	I	PC	Han	Mod	Zen	V	A-L	D-R	D. B-L	B-L 51	U	4	Spi	Tim 65706-H	W	F	6.8	36.4	G†	Tim 15733-H	Ros	126	82	7400
Kenworth 184	3850	164	206	B 9 .00/20	DB9.00/20	Her WXC	6-4x4½	38.4	L	PC	Han	Per	Zen	V	A-L	D-R	D. B-L	B-L 55 & 60	U&A	7	Spi	Tim 65706-H	W	F	7.75	93.5	G†	Tim 15733H	Ros	150	100¼	7300
*Kenworth 185	4750	183¼	210¾	P 36x8	DP36x8	Her YXC	6-4¾x4¾	45.9	L	PC	Han	Per	Zen	V	A-L	D-R	D. B-L	B-L 51	A	4	Blo	Tim 65700D	W	F	9.25	49.5	A*	Tim 15302	Ros			6200
King Zeitler 60		156°		S 36x5‡	S 36x10	Con 18R	4-4½x5¼	27.2	L	FP	Pha	Chi	Str	G	Eis	A-L	D. B-L	B-L 55 Max	A	7	Blo	Tim 65700SP	W	F	7.75	73.6	B*	Tim 15302	Ros			6200
King Zeitler 62A				P 34x7	DP34x7	Con 18R	6-3¾x5	33.7	L	PC	Han	Chi	Zen	G	Bos-R	Bos-R	D. B-L	B-L 55	U	4	Spi	Tim 65600	W	F	7.75	41.5	A	Tim 15302	Ros	170	106	6200
Kleiber Speed	4000	190	192½	P 34x7	DP34x7	Con 18R	6-4x4½	38.4	L	FP	Non	Own	Str	G	Bos-R	Bos-R	D. B-L	B-L 55	U	4		Tim 65700D						Tim 1544B	Ros			
Kleiber	4100	163		S 36x5	DS36x5‡	Con L4	4-4½x5½	32.4	L	FP	Non	R-T	Str	V	Bos-R	Bos-A	D. B-L	B-L 60		4		Tim 65700SP						Tim 1544B	Ros			
Kleiber Spee	4350	163		S 36x5	S 36x12	Bud BUS	6-4x5½	38.4	L	PC	Non	R-T	Str	V	Bos-R	Bos-A	D. B-L	B-L 60	U	4	Spi	Wis 1402	R	F	10.08	95.7	B*	Tim 15300	Ros	95	73	7450
*Lange M	5150	140°	222	P 38x7	DP38x7	Her YXC	6-4¾x4¾	45.9	L	PC	Pie	Own	Str	O	A-L	A-L	D. B-L	B-L 60 Max	A	7	Spi	Wis 1418	R	F	9.12	48.7	B	Tim 15300	Ros	112	75	6850
*Lange H-1	5150	151	187	P 34x7	DP34x7	Her YXC	6-4¾x4¾	45.9	L	PC	Pie	Own	Str	O	A-L	A-L	D. B-L	B-L 55	U	4	Spi	Tim	W	F	Opt	Opt	E†‡	Tim	Ros	156	92¾	.....
Larrabee Deyo 60		184	220	P 34x7	DP34x7	Con 18R	6-4x4½	38.4	H	PC	Non	Per	Zen	...	D-R	D-R	D. B-L	B-L	U	4	Spi	Tim	W	F	7.4	38.78	F	Tim	Ros	144	86	6600
Larrabee 51		177⅛	191⅛	P 34x7	DP34x7	Con 18R	6-4x4½	38.4	H	PC	Non	Per	Zen	G	A-L	A-L	D. B-L	B-L 51	U	4	Spi	Tim 65706 D H	W	F	9.00	3 2.10	G	Tim 15733H	Ros	162	105	6000
Le Moon HB30	3950	182	182	P 36x8	DP36x8	Wau 6KU	6-4¼x4¾	43.3	...	FP	Wau	Chi	Str	G	A-L	A-L	D. B-L	B-L 51	U	4	Spi	Tim 65706 D H	W	F	7.25	3 8.78	G	Tim 15733H	Ros	162	105	6000
Le Moon HB31	3750	182	182	S 36x5	S 36x10	Wau 6KU	6-4¼x4¾	43.3	...	FP	Wau	Chi	Str	G	A-L	A-L	D. B-L	B-L 51	U	4	Spi	Wis 1261K	R	F	6.38	3 4.13	A	Tim 1560	Ros	198	125½	8000
Le Moon H3V	5650	211	211	P 36x8	DP36x8	Wau 6KU	6-4¼x4¾	43.3	...	FP	Wau	Chi	Str	V	D-R	D-R	D. B-L	B-L 55	A	4	Spi	Tim 65702D	W	F	8.5	45.4	A‡	Tim 15302	Ros	151⅞	95⅛	7500
Macoar 64		177	220	S 36x5	DS36x5	Bud YBUI	4-4½x6	32.4	L	PC	Pie	Own	Zen	V	D-R	D-R	D. B-L	B-L 55	A	4	Spi	Tim 65702D	W	F	8.5	45.4	A‡	Tim 15302	Ros	151⅞	95⅛	7500
Macoar 66		177	220	S 36x5	DS36x5	Bud BA	6-4½x5½	40.8	L	PC	Pie	Own	Zen	G	Bos-R	N-E‡	D. Own	Own AB	A	4	Spi	Own AB	C	D	*8.87	43.0*	B*	Own AB	Own	144°	91	5500
*Mack AB	3500	146½	164½	S 36x4‡	DS36x4‡	Own AB	4-4¼x5	28.9	L	PS	Own	Own	Str	G	Bos-R	N-E‡	D. Own	Own AB	U	4	Spi	Own AB	R	F	*9.25	44.9*	B*	Own AB	Own	144°	91	6050
*Mack AB	3950	164½°		S 36x4‡	DS36x4‡	Own AB	4-4¼x5	28.9	L	PS	Own	Own	Str	V	N-E	N-E	P. Own	Own AL	A	4	Spi	Own AL	R	F	5.88	30.98	G*‡	Own AK	Own	144	80	8950
*Mack BJ	5900	168½°		S 36x8	DP36x8	Own BK	6-4½x5½	48.6	L	PS	Non	Own	Str	V	A-L	A-L	P. B-L	B-L 35	A	4	Cle	Tim 63721H	W	F	6.5	34.8	G†	Tim 14703H	Ros	156	102	4750
*Moreland B-7	2520	184		S 32x6	DP32x6	Her WXB	6-3¾x4½	33.7	L	PC	Non	Lon	Zen	O	A-L	A-L	D. Ful	Ful	A	4	Blo	Tim 65706DHP	W	F	6.00	27.8	G†	Tim 15733H	Ros	149	101	7200
Noble 166		180		P 34x7	DP34x7	Bud BA6	6-4½x5½	40.8	L	PC	Pie	Chi	Str	V	A-L	A-L	D. Ful	Ful GOG	A	8	Blo	Wis 8817	R	F	5.37	69.39	A	Shu 5510	Ros	85	53	5800
†Omort 300		130	Opt.	P 34x7	DP34x7	Her OXC	4-4¼x5	28.9	L	PC	Non	You	Zen	V	A-L	A-L	D. Ful	Ful GOG	A	8	Blo	Wis 8817	R	F	5.37	69.39	A	Shu 5510	Ros	53	53	6000
†Omort 3005		130	Opt.	P 34x7	DP34x7	Her WXB	6-3¾x4½	33.7	L	PC	Non	You	Zen	V	A-L	A-L	D. Ful	Ful GCL	A	4	Pet	Tim 65660	W	F	8.5	.....	...	Shu 550	Ros	.....	.....	5200
Oneida C9		160		P 34x7	P 36x8	Wau CR	4-4¾x5¾	30.6	L	PS	Non	Mod	Str	...	A-L	A-L	D. Ful	Ful GCL	A	4	Pet	Tim 65660	W	F	8.5	.....	A	Shu 550	Ros	.....	.....	7200
Oneida CC9		160°		P 34x7	DP34x7	Wau 6XL	6-3½x4½	29.4	L	PS	Non	Per	Str	V	A-L	A-L	D. Ful	Ful GCL	A	4	Pet	Tim 65660	W	F	8.5	.....	A	Shu 550	Ros	.....	.....	5200
Oshkosh M	3250	146	170	P 36x6	DP36x6	Her WXC	6-4x4½	38.4	L	PC	Her	Own	Zen	V	L-N	L-N	D. B-L	B-L	U	4	Blo	Wis 67317	R	F	7.75	42.4	A	Wis 21	Han	131¾	73	6550
Oshkosh H	4350	146	165	S 36x8	S 36x12	Her G	4-4¾x5¾	36.1	L	PC	Her	Own	Str	V	Bos-R	.....	D. B-L	B-L	U	4	Blo	Own H	R	F	8.94	47.8	B	Own H	Han	114½	83½	7800
Oshkosh H6	4450	146	165	S 36x8	S 36x12	Her YXB	6-4¾x4¾	38.4	L	PC	Her	Own	Zen	V	Bos-R	.....	D. B-L	B-L	U	4	Blo	Own H	R	F	8.94	47.8	B	Own H	Han	114½	83½	7900
Pierce-Arrow XB	3750	150	180	S 36x5‡	DS36x5‡	Own XB	4-4x5½	25.6	T	FP	Own	Own	Str	P	D-R	D-R	D. Own	Own AB	A	4	Spi	Own XB	W	½	9.25	48.1	A*	Own XB	Own	125⅛	72⅛	6280
Rehberger B		162	180	S 36x5	S 36x10	Bud YBU	4-4½x6	32.4	L	PC	K.P.	Bus	Zen	V	Eis	D-R	D. B-L	B-L 51	U	4	Spi	Tim 6566	W	F	7 5	46.2	A*	Shu 5550	Ros	146¼	90	6460
*Relay 60	4595	175	192	P 36x6	DP38x7	Bud BUS	6-4x5½	38.4	L	PC	Bud	Lon	Zen	V	A-L	A-L	D. B-L	B-L 51	U	5	Blo	Own 60	R	F	7.88	58.5	G	Tim 15733H	Han	156	97½	7500
*Relay 50	4130	161		P 36x6	DP40x8	Bud DW6	6-3¾x5	33.7	L	PC	Non	Lon	Zen	V	A-L	A-L	D. B-L	B-L 51-5	U	5	Blo	Own 60	R	F	7.88	58.5	G	Tim 14704H	Han	144	82	7200
Relay 80	5170	175	192	P 36x6	S 40x10	Bud BA6	6-4x5½x5½	40.8	L	PC	Bud	Lon	Zen	V	A-L	A-L	P. B&B	Cov SHO	A	8	Blo	Own 74	R	F	9.95	84.18	A	Tim 16302	Ros	144	94½	8400
Reo GA	2035	163		P 32x6	DP32x6	Own	6-3¾x5	27.3	L	PC	Non	Own	Sch	V	D-R	D-R	D. B-L	Own	U	4	Pet	Own	S	F	6.22	41.5	E†	Own	Han	127¾	78¼	4625
Reo GC	2140	179		P 32x6	DP32x6	Own	6-3¾x5	27.3	L	PC	Non	Own	Sch	V	D-R	D-R	D. B-L	Own	U	4	Pet	Own	S	F	6.22	41.5	E†	Own	Han	156¾	94⅛	4850
Reo GD	1985	144		P 32x6	DP32x6	Own	6-3¾x5	27.3	L	PC	Non	Own	Sch	V	D-R	D-R	D. B-L	Own	U	4	Pet	Own	S	F	6.81	45.25	E†	Own	Han	76⅜	49⅛	4570
Republic H-I		163°		P 34x7	DP34x7	Lyc TS	6-3½x5	36.2	L	PC	Non	Own	Zen	V	A-L	A-L	D. Ful	Ful	U	4	U-M	Eat	B	F	5.5	35.75	G*	Eat	Han	147¾	84	5750

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Key of abbreviations page 94

Trade Name and Model	General: Chassis Price	Standard Wheelbase (Inches)	Maximum Wheelbase furnished	Tire Size: Front (Inches)	Tire Size: Rear (Inches)	Engine: Make and Model	Number of Cylinders Bore and Stroke	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)	Fuel System: Carburetor (Make)	Fuel System: Fuel Feed	Electrical System: Ignition System (Make)	Electrical System: Generator and Starter (Make)	Clutch: Type and Make	Gearset: Make and Model	Gearset: Location	Gearset: No. of Forward Speeds	Universals (Make)	Rear Axle: Make and Model	Rear Axle: Final Drive	Rear Axle: Type	Gear Ratios: Total Reduction in High	Gear Ratios: Total Reduction in Low	Brakes, Location	Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase: Cab to rear of frame	Standard Wheelbase: Cab to rear axle	Chassis Weight (lbs.) (stripped)
3½ Ton—Cont'd																																
*Service 80	5250	175	192	S 36x6	S 36x12	Bud BA6	6-4½x5½	40.8	L	PC	Bud	Lon	Zen	V	A-L	A-L	P. B&B	B-L 60 Max	A	7	Blo	Tim 66700DP	W	F	10.33	98.2	B	Tim 16302	Ros	144	94½	8200
Standard 3½-5 K	....	160°	172	S 36x5	S 36x12	Con L4	4-4½x5½	32.4	L	FP	Sim	Lon	Str	V	Eis	Bos A*	D. B-L	B-L 55	A	7	Spi	Tim 66700SP	W	F	6.80	83.1	A*	Tim 16300	Ros	144	93¾	7465
Standard 3½-5KS	....	160°	172	S 36x5	S 36x12	Con L4	4-4½x5½	32.4	L	FP	Sim	Lon	Str	V	Eis	Bos A†	D. B-L	B-L 60	A	7	Spi	Tim 66700SP	W	F	6.80	83.1	A*	Tim 16300	Ros	144	93¾	7519
Sterling DW15-64XK	....	163	177	S 36x4	S 36x8	Wau 6XK	6-3¾x4½	33.7	L	FP	Wau	Hex	Zen	V	.....	L-N	D. B-L	B-L 51	U	4	Har	Tim 65000H	W	F	8.5	45.47	G	Tim 15733H	Ros	149¾	85¾	5775
Stewart 19X	3690	165	235	S 36x5	S 36x10	Lyc TS	6-3½x5	36.2	L	PS	Han	Mod	Str	V	D-R	D-R	D. Ful	Ful	U	12	Spi	Tim	W	F	7.25	127.0	E*	Sal	Ros	136¼	79½	6990
Studebaker 99	3795	184	.....	B7.50/20	B7.50/20	Own	8-3½x4¾	39.2	L	PC	Non	Lon	Str	G	Eis	A-L	D. B-L	B-L 55	A	4	Blo	Wis 1400	R	F	9.12	48.7	A*	Shu 5550	Ros	131½	85½	6200
United 70	....	158⅞	.....	S 36x5	S 36x5	Her L	4-4½x5¼	32.4	L	PC	Pie	Per	Str	V	Eis	A-L	D. B-L	B-L 55	A	4	Blo	Wis 1400	R	F	9.12	48.7	A*	Shu 5550	Ros	130¼	84½	6400
United 70C6	....	158⅞	.....	S 36x5	S 36x5	Con 8T	6-4¼x5¼	40.8	L	PC	Pie	Per	Str	V	Bos R	D-R	. Own	Own	U	5	Own	Own	R	D	8.50	85.0	E*	Own	Ros	108	78	7500
*Walter FKD	6200	Opt	118	P 38x7	DP38x7	Own 6	6-4¼x4¾	43.4	L	PC	Own	Own	Str	V	Bos R	A-L	D-BL	BL-55	A	4	Spi	Tim 65706D	W	F	9.3	49.8	B‡	Shu 5550	Ros	Opt	Opt	8100
Ward La France 4B	....	Opt	Opt	S 36x5	DS36x6	Wau DU	4-4½x6¼	32.4	L	PC	Wau	Own	Str	G	Bos R	A-L	D-BL	BL-55	A	7	Spi	Tim 65706D	W	F	9.3	88.6	B‡	Shu 5550	Ros	Opt	Opt	8300
Ward La France 4E-6	....	Opt	Opt	P 38x7	DP38x7	Wa KU	6-4¼x4¾	43.3	L	PC	Wau	Own	Str	V	Bos R	A-L	D-BL	BL-55	A	4	Spi	Tim 65706H	W	F	7.25	38.8	G†	‡Tim 15733H	Ros	Opt	Opt	8500
Ward La France 35R	....	Opt	Opt	P 36x8	DP36x8	Wau KU	6-4¼x4¾	43.3	L	PC	Wau	Own	Str	V	L-N	L-N	D-BL	BL-55	A	4	Spi	Own	R	F	10.1	66.1	B*	Own	Own	167⅜	107½	8402
White 55	4650	174°	215	S 36x5‡	DS40x5	Own GRB	4-4¼x5¾	28.9	L	FP	Own	Own	Zen	V	.....	L-N‡	P. Own	Own 4B	U	4	Thsp	Own 50 R	W	F	7.75	73.62	B‡	Vul 40F	Ros	135½	84¼	7500
Wichita 6-90	4950	165	Opt.	P 38x7	DP38x7	Wau 6KU	6-4¼x4¾	43.3	L	PC	Wau	You	Str	V	Eis	D-R	D. B-L	B-L 55	A	4	Spi	Tim 65700D	W	F	Opt	.....	A*	Tim 15300	Ros	139	85	7750
Witt-Will L	....	.....	192	S 36x5	S 36x12	Con L4	4-4½x5½	32.4	L	FP	Pie	Own	Zen	V	Eis	D-R	D. B-L	B-L 55	A	4	Spi	Tim 66702	W	F	9.1	40.53	G†	Tim 16733	Ros	.....	.....	7000
Witt-Will R35	....	Opt	.....	P 38x9	DP38x9	Con 20R	6-4½x4¾	40.8	H	PC	.....	Per	Zen	V	D-R	D-R	D. B-L	B-L 51	U	5	Spi	Tim 66702	W	F	*7.75	74.62	A	Tim	Ros	.....	.....	6700
Woods 61	4250	146°	.....	P 34x7	DP34x7	Her G	4-4¾x5¾	36.1	L	PC	Pie	Chl	Zen	V	Eis	A-L	D. B-L	B-L	A	7	Blo	Tim	W	F								
4 Ton																																
Acorn 70	4250	162	.....	S 36x6	S 40x12	Bud YBU-1	4-4½x6	32.4	L	PC	McC	Chi	Str	G	Bos-R	.....	D. Ful	B-L 60	U	8	Pet	Tim 66600	W	F	Opt	Opt	A	Tim 1632	Ros	.....	.....	8500
American La France W	....	Opt	201¾	S 36x5	S 36x10	Own 2R	4-4¼x6	28.9	L	PS	Own	Bus	Zen	V	Bos-A	Bos A‡	D. Own	Own 2R	A	4	Own	Own 2R	R	F	7.57	40.6	B*	Own 2R	.....	132	81½	6600
Amer. La France 12R	....	Opt	160	P 36x8	DP36x8	Own	6-4½x5½	40.8	L	FP	Bud	G&O	Zen	V	D-R	D-R	P. B&B	Own	A	4	Spi	Tim 6670BY	W	F	6.1	49.0	..	Tim 15733BY	Ros	.....	.....	7500
Amer. La Fra.Chieftain	....	Opt.	Opt.	P 36x8	DP36x8	Own	6-4½x5½	40.8	L	FP	Bud	G&O	Zen	V	D-R	.....	P. B&B	Own	A	4	Spi	Tim 66704BY	W	F	6.00	66.0	I	Tim15733BY	Ros	Opt.	Opt.	7200
Armleder 70-6	....	156	186	S 36x6	S 36x12	Bud BUS	6-4x5½	38.4	L	PC	Non	Lon	Zen	V	A-L	A-L	D. B-L	B-L 55	U	4	Spi	Tim	W	F	10.3	55.3	B*	Tim	Ros	138	87¾	7600
Armleder 70-6	....	156°	186	S 36x6	S 36x12	Bud YBU-1	4-4½x6	32.4	L	PC	Han	Lon	Zen	V	A-L	A-L	D. B-L	B-L 55	U	4	Spi	Tim	W	F	10.3	55.3	B*	Tim	Ros	138	87¾	7500
Armleder 70	....	156°	186	S 36x6	S 36x12	Bud YBU-1	4-4½x6	32.4	L	PC	Han	Lon	Zen	V	A-L	A-L	D. B-L	B-L 55	U	4	Spi	Tim	W	F	10.3	83.1	A*	Tim	Gem	142¾	93¾	8000
Atterbury 22D	....	174°	198	S 36x5	DS36x6	Con L4	4-4½x5½	32.4	L	FP	Pie	Fed	Zen	V	Bos-A	A-L	D. B-L	B-L 55 Max	A	7	Spi	Tim	W	F	10.3	83.1	A*	Tim	Gem	142¾	93¾	8000
Atterbury C-6	....	186	220	P 36x8	DP36x8	Con 20R	6-4½x4¾	40.8	H	PC	Han	You	Zen	V	Eis	L-N‡	D. B-L	B-L 55	A	4	Spi	Tim 66702D	W	F	7.25	38.79	B	Tim 15302	Gem	160½	103½	8300
Brockway R	....	164°	191	S 36x5‡	S 36x12‡	Con L4	4-4½x5½	32.4	L	FP	K.P.	Bus	Zen	V	Eis	L-N‡	D. B-L	B-L 55	A	4	Spi	Tim 66702D	W	F	8.75	46.9	B‡	Tim 16300	Ros	177	103	7890
Chicago 40C	....	Opt	Opt	S 36x6	S 36x12	Wau EU	4-5x6¼	40.0	L	FP	Wau	Chl	Zen	G	Apo	A-L‡	D. B-L	B-L 70 Max	A	7	Spi	Tim 66702D H	W	F	10.33	97.1	B‡	Tim 16302	Ros	Opt	Opt	10175
Clinton 90	....	190	Opt	S 36x5	DS36x6	Bud YTU	4-4½x6	32.4	L	PC	Bud	Own	Zen	V	Spi	D-R	D. B-L	B-L 55	A	4	Blo	Tim 66600	W	F	8.75	46.8	A*	Tim 16302	Ros	Opt	Opt	8000
Clinton 90M	....	190	Opt	S 36x5	DS36x6	Bud YTU	4-4½x6	32.4	L	PC	Bud	Own	Zen	V	Spi	D-R	D. B-L	B-L 55 Max	A	7	Blo	Tim 66600	W	F	8.75	83.1	A*	Tim 16302	Ros	Opt	Opt	8050
Commerce 80	5330	175	192	S 36x6	S 36x14	Bud BA6	6-4½x5½	40.8	L	PC	Bud	Lon	Zen	V	D-R	D-R	D. B-L	B-L 60 Max	A	7	Blo	Tim 65706H	W	F	Opt	Opt	H†	Tim 15733H	Ros	132	92	6870
Corbitt (18W6)	....	178	230	P 36x8	DP36x8	Con 18R	6-4x4½	38.4	H	FP	Non	Per	Zen	V	D-R	D-R	D. B-L	B-L 55	A	7	Spi	Tim 66704 DH	W	F	Opt.	Opt.	6†‡	Tim 16710H	Ros	162	109	9200
*Corbitt (24W6)	....	195	230	P 36x8	DP36x8	Con 20R	6-4½x4¾	40.8	H	FP	Non	Per	Zen	V	D-R	D-R	D. B-L	B-L 55	A	7	Spi	Tim 66704 DH	W	F	9.00	48.15	G	Tim 16700H	Ros	204	118	9200
*Day-Elder KF	5000	162	202	S 36x5‡	S 36x12‡	Con 21R	6-4¾x4¾	45.9	L	FP	Con	Bus	Zen	V	D-R	D-R	D. B-L	B-L 60	A	4	Spi	Tim 66702DH	W	F	9.00	48.15	G	Tim 16700H	Ros	204	118	7020
Denby 27	....	170	.....	S 36x5	S 36x12	Con L4	4-4½x5½	32.4	L	PC	Han	Lon	Zen	G	Eis	.....	D. Ful	Ful	A	7	Spi	Own	W	F	6.25	59.4	6†‡	Shu 5582B	Ros	162	103	8300
Diamond T801 6-wheel	4140	189½	219¾	P 36x8	P 36x8	Her YXC	6-4¾x4¾	45.9	L	PC	Han	G&O	Zen	G	A-L	A-L	D. Coy	B-L	A	7	Spi	Own	W	F			G	Tim 15733H	Ros	.....	.....	7000
*Eagle 6-30	....	176	.....	P 34x7	P 34x7	Her WXC	6-4x4½	38.4	L	PC	Opt.	Per	Zen	V	A-L	A-L	D. B-L	B-L 55	U	4	Pet	Tim 65000H	U	F	.....	.....	.....	.....	Ros	.....	.....	8500
Fageol 445	5650	183½	216½	P 36x6	DP36x6	Wau DU	4-4½x6¼	32.4	L	PC	Wau	Per	Zen	V	D-R	D-R	D. B-L	B-L 55 & 60	U&A	7	Spi	Tim 66700	W	F	6.92	124.37	B‡	Tim16000	Ros	168	101⅞	9300
Fageol 485	6400	184¼	217¾	P 36x6	DP36x6	Wau A-B	6-4½x5¾	48.6	L	PC	Wau	Per	Zen	V	D-R	D-R	D. B-L	B-L 55 & 60	U&A	7	Spi	Tim 66700	W	F	6.92	124.37	B‡	Tim16000	Ros	168	95¾	9800
Fageol 470	5750	183½	216½	P 36x6	DP 36x6	Wau SRL	4-4¾x5½	45.94	L	PC	Wau	Per	Zen	V	D-R	D-R	P. B&B	B-L 55	A	7	Pet	Tim 66704HP	W	F	7.8	74.10	6†‡	Own	Ros	168	101⅞	9525
*Federal 4C6-A-4-5 Ton	4735	192	231	P 36x8	DP36x8	Con 20R	6-4½x4¾	40.8	L	PC	Con	Lon	Zen	V	D-R	D-R	P. B&B	B-L 55	A	7	Pet	Tim66704 TWP	W	F	7 8	74.10	G°	Own	Ros	180	107½	8330
*Federal 4C6AB-4-5 Ton	4960	192	231	P 36x8	DP36x8	Bud BA6	6-4½x5½	40.8	L	PC	Bud	Lon	Zen	V	Bos-R	Bos-R	D. Ful	Ful HU-16	U	8	.....	Own	I	..	8.53	155.4	I	Own	Woh	100	72½	8400
*Freeman BA-144	5800	144	144	P36x8	DP36x8	Bud BA-6	6-4½x5½	47.5	L	PC	Bud	Lon	Str	E	A-L	A-L	D. Own	B-L 60 Max	A	7	Blo	Tim 66700DP	W	F	10.33	98.2	B	Tim 16302	Ros	144	94½	8400
Garford 80	5330	175	192	S 36x6	S 36x14	Bud BA6	6-4½x5½	40.8	L	PC	Bud	Lon	Zen	V	D-R	D-R	D.	Mun	A	4	Spi	Tim 65706-N	W	F	7.25	44.81	G*	Eat 526-F	Jac	100	59	6208
Gen. Mot. T60-5002	3160	140°	200	P 36x8	DP36x8	Buick	6-3½x5	31.5	I	PC	Han	Lon	Mar	O	Bos-R	D-R	D. B-L	B-L 60 Max	A	7	Spi	Tim 66704DHP	W	F	10.33	98.13	B	Tim 16710H	Ros	.....	.....	8400
*Gotfredson RW84A	.....	160	180	S 36x6	DS40x7	Bud YBU1	4-4½x6	32.4	L	PC	Pie	McC	Str	O	Bos-R	D-R	D. B-L	B-L 51-5	U	5	M.M.	Tim 65702	W	F	7.80	41.2	I	Tim 15730- H	Ros	.....	.....	6800
†G-P 57-6	....	154	175	B9.75/20	DB9.75/20	Wau 6MK	6-4½x4¾	40.8	L	PC	Wau	Chi	Str	V	A-L	A-L	D. B-L	B-L 51-5	U	5	M.M.	Tim SW-100	W	F	.....	.....	I	Tim 15300	Ros	.....	.....	7800
†G-P 57-6-S W-6 wh	....	160	Opt.	B 9.75/20	B9.75/20	Wau 6MK	6-4½x4¾	40.8	L	PC	Wau	Chi	Str	V	A-L	A-L	D. Ful	Ful MGU-14	U	4	Blo	Wis 6647	R	F	4.3	27.95	H*‡	Eat 423	Ros	176⅞	119⅞	7200
Gramm GY-210	4345	210°	210	P 34x7	DP34x7	Con 21R	6-4¾x4¾	45.9	I	PC	Non	Per	Zen	O	A-L	A-L	D. Ful	Ful H	U	8	Blo	Wis 1450	R	F	7.08	79.0	B*	Wis 30	Ros	138	83¾	7600
*Gramm 45	3995	153°	200	S 36x5‡	S 36x12‡	Lyc TS	6-3⅞x5	36.2	L	PC	Han	Own	Zen	V	A-L	A-L	D. Ful	Ful HU	U	4	Blo	Wis 1250	R	F	7.12	34.2	B*	Shu 5550B	Ros	138	83¾	7600
Gramm 48 low bed	3995	153°	200	S 36x5‡	S 36x12‡	Lyc TS	6-3⅞x5	36.2	L	FP	Han	Own	Zen	V	A-L	A-L	D. Ful	Ful MGU	U	8	Own	Wis	W	F	9.00	96.3	B*	Shu 610	Ros	144	87¾	8360
Gramm-Bernstein 40	....	156°	176	S 36x5	DS36x5	Con L4	4-4½x5½	32.4	L	PC	Pie	Own	Str	G	Eis	A-L	D. Ful	Ful H1	A	8	Spi	Tim 65706	W	F	7.50	54.0	A*	Shu 610	Ros	.....	.....	7500
Guilder J	4650	Opt	.....	S 36x5	DS36x6	Bud YTU	4-4½x6	32.4	L	PC	Pie	G&O	Zen	V	Eis	Non	D. B-L	B-L 55	A	4	Spi	Tim 65706	W	F	Opt	Opt	B	Shu 5550	Ros	.....	.....	6600
Guilder J-6	4250	172	184	P 36x8	DP36x8	Her WXC	6-4x4½	38.4	L	PC	Mon	G&O	Zen	V	D-R	D-R	D. B-L	B-L 51	U	4	Blo	Wis. 8817	R	F	.....	.....	I	Tim 57334H	Ros	110	.....	7500
Hahn 47HD	....	151	.....	P 34x7	DP34x7	Con 18R	6-4x4½	38.4	H	FP	Non	Chi	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Blo	Wis 8817	R	F	.....	.....	I	Tim 15733H	Ros	168	.....	7700
Hahn 47HDL	....	164	184	P 34x7	DP34x7	Con 18R	6-4x4½	38.4	H	FP	Non	Chi	Zen	V	A-L	A-L	D. B-L	B-L 35	U	4	Blo	Wis 8817	R	F	.....	.....	I	Tim 15733H	Ros	168	.....	7800
*Hendrickson U-6	4900	Opt.	Opt.	P 40x8	DP40x8	Bud BA6	6-4½x5½	40.8	L	PC	Bud	Chi	Zen	V	A-L	A-L	D. B-L	B-L 60	A	4	Spi	Tim 66700	W	F	Opt	Opt	G†‡	Tim 16302	Ros	.....	.....	7800
Indiana 138	....	163¾	199¾	S 36x5	S 36x6	Her L	4-4½x5¾	32.4	L	PC	Pie	Lon	Str	V	Eis	A-L†	P. B&B	B-L 60	A	7	Spi	Tim 66700D	W	F	8.75	83.1	B*	Shu 5550	Ros	132	84¼	7800
Indiana 638	....	174	210	S 36x5	S 36x12	Wis H	6-4x5	38.4	H	FP	K.P.	McC	Str	V	Eis	A-L†	P. B&B	B-L 60 Max	A	7	Spi	Tim 66700	W	F	8.75	83.1	B*	Shu 5550	Ros	132	84¼	8100
Kenworth N	4395	170	200	S 36x6‡	S 40x12	Bud YBU	4-4½x6	32.4	L	PC	Bud	Per	Zen	V	Bos-R	D-R	D. B-L	B-L 60	A	4	Spi	Tim 66702D	W	F	8.75	53.3	A*	Tim 16302	Ros	126	93	8800
†Kenworth 240	5450	170	221	P 36x8	DP36x8	Her YXC2	6-4½x4¾	48.6	L	PC	Han	Per	Zen	V	D-R	D-R	D. B-L	B-L 55&60	U&A	8	Spi	Tim 66704D H	W	F	7.75	93.2	G†	Tim 26450H	Ros	126	86½	7700
Kissel Heavy Duty	....	168	.....	S 36x5‡	S 36x12‡	Wau DU	4-4½x6¼	32.4	L	PC	Pie	McC	Str	V	Eis	D-R‡	D. W-G	Ful H	A	4	Spi	Tim 16302	W	½	11.7	73.6	A*	Tim 66700	Ros	.....	.....	7500
Kleiber	5000	202	.....	P 36x8	DP36x8	Bud BA6	6-4½x5½	40.8		PC	.....	Fed	Str	V	Bos-R	.....	D. B-L	B-L	A	7	Spi	Tim 65700SP	W	F	Opt	.....	A*	Tim 15302	Ros	.....	.....	7600
*Lange F6	5250	148	188	P 40x8	DP40x8	Her YXC	6-4¾x4¾	45.9	L	PC	Pie	Own	Str	O	A-L	A-L	D. B-L	B-L 60 Max	A	7	Spi	Tim 66700	W	F	10.33	56.0	B	Tim 16300	Ros	154½	99½	8600
Le Moon H46	....	184	192	P 36x8	P 36x8	Wau 6KU	6-4¼x4¾	43.3	...	FP	Wau	Chl	Str	V	A-L	A-L	D. B-L	B-L 51	U	5	Opt	Tim 6370H	W	F	6 25	46.31	G	Tim 16302	Ros	162	105	.....
Maccar 84	....	177	209¾	S 36x6	DS36x6	Bud YBUI	4-4½x6	32.4	...	PC	Pie	Bus	Str	V	Bos-R	D-R	D. B-L	B-L 55	A	4	Spi	Tim 66702D	W	F	9.66	51.7	...	Tim 16302	Ros	148	92½	8200
Maccar 86	....	177	209¾	S 36x6	DS36x6	Bud BA-6	6-4½x5½	40.8	...	PC	Pie	Bus	Str	V	Bos-R	D-R	D. B-L	B-L 55	A	4	Spi	Tim 66702D	W	F	9.66	51.7	...	Tim 16302	Ros	.....	.....	8400
*Mack BJ	5800	168½	.....	P 36x8	DP36x8	Own BK	6-4½x5½	48.6	L	PS	.....	Own	Str	V	N-E	N-E	P. Own	Own AL	A	4	Spi	Own AL	R	F	5.88	30.98	6‡*	Own AK	Own	144°	80	8950°
†Moreland BD-7	3565	184	.....	P 34x7	P 34x7	Her WXB	6-3¾x4½	33.7	L	PC	Non	Lon	Zen	O	A-L	A-L	P. B-L	B-L 35	U	4	Cle	Own	W	F	7.66	40.98	G†	Tim 14703	Ros	168	102	6000

Oshkosh HXC	5075	146		S 36x8	S 36x12	Her YXC	6-4½x4¾	45.9	L	PC		Own	Str	V	Bos-R		D. B-L	B-L	A	7	Blo	Own	R	F	9.6	91.2	B	Own FHX	Han	114½	83½	8006
Pierce-Arrow WC	5100	162	180	S 36x5‡	DS36x6	Own WC	4-4½x6¾	32.4	†	FP	Own	Own	Str	P	D-R	D-R	D. Own	Own WC	A	4	Spi	Own WC	W	½	8.00	41.5	B*	Own WC †	Own	133¼	78¾	8490
Relay 80	5380	175	192	P 38x7	S 40x14	Bud BA6	6-4½x5½	40.8	L	PC	Bud	Lon	Zen	V	Eis	D-R	D. B-L	B-L 55	A	U	4	Spi	Tim 6666	W	F	8.75	46.8	A*	Tim 16302 †	Ros	157¾	102	7940
Republic M1		171°		P 36x8	DP36x8	Wau 6KS	6-4x4½	38.4	L	PC	Wau	Own	Zen	V	A-L	A-L	D. B-L	B-L	U	5	U-M	Eat	R	F	8.85	53.0	B*	Shu	Han	139	89½	6600
Republic M1		159	188	P 34x7	DP34x7	Con 18R	6-3½x5		L	FP	Con	Fed	Str	V	D-R	D-R	D. B-L	B-L	U	4		Eat	R	F	8.85		G	Eat	Ros			6640
Sanford O	2975	174	199	P 34x7	DP34x7	Her WXC	6-4x4½	38.4	L	PC			Zen		A-L	A-L	D. Ful	Ful MGU	A	4	Spi	Wis 8817AL	R	F	7.14	46.41	G	Shu 5572	Ros	Opt.	Opt.	6500
*Schacht 30		151	184	P 34x7	DP34x7	Con 18R	6-4x4½	38.4	L	FP	Non	Own	Str	V	D-R		D. B-L	B-L	A	5	Spi	Wis	R	F			A*	Tim	Ros	108	71	7500
Selden 47CD	5330	175	192	S 36x6	S 36x14	Bud BA6	6-4½x5½	40.8	L	PC	Bud	Lon	Zen	V	A-L	A-L	D. Own	B-L 60 Max	A	7	Blo	Tim 66700DP	W	F	10.33	98.2	B	Tim 16302	Ros	144	94½	8400
Service 80		166	180	S 36x5	S 36x10	Wau 6KS	6-4x4¾	38.4	L	FP	Wau	Hex	Zen	V		L-N	D. B-L	B-L 55	U	4	Har	Tim 65704	W	F	8.5	45.47	A	Tim 15300	Ros	147	86	6850
Sterling DW18-64KS		124¼		P 34x7	DP34x7	Her OX	4-4x5	25.6	L	PC	Non	Per	Str	G	Eis	A-L	D. B-L	B-L 35	U	4	Blo	Wis 6600	R	F	7.75	41.46	A*	Shu 510	Ros	70⅝	54½	5100
United 40D	3495	145°		P 36x7	P 36x7	Her K	4-4½x5¾	32.4	L	FP	Non	Chi			D-R	D-R	D. Ful	Ful	U	4		Wis	R		Opt	Opt		Shu	Ros			
Valley		172°	192	S 36x6	DS40x6	Con B5	4-4¾x6	36.1	L	PC	Pie	Own	Zen	V	D-R	D-R	D. B-L	B-L 55	A	7	Spi	Tim 66702	W	F			G†	Tim 16700	Ros			
Ward La France 4D6						Con R20	6-4¾x4¾	40.8	L	PC																													
Witt-Will A4																																					
Witt-Will R35																																					
4½ Ton																																					
Acme 90L		192		S 36x5	S 40x12	Con B7	4-5x6	40.0	L	PC	Pie	Per	Str	V	Eis	A-L	D. B-L	B-L 60	A	7	Blo	Tim 66600	W	F	8.75	83.5	A	Tim 16300	Ros	168⅝	105⅞	8400
Gen. Motors T60-5002	3160	140°	200	P 36x8	DP36x8	Buick	6-3½x5	31.5	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Tim 65706N	W	F	7.25	44.81	G*	Eat 526F	Jac	100	59	6208
Republic 30W		170°		S 36x5	S 36x12	Wau CU	4-4¾x5¾	30.6	L	PC	Wau	Own	Zen	V	Bos-A	A-L	D. Ful	Ful	U	4	U.M	Eat	I	D	10.2	49.2	B	Shu	Han	145¾	90	6700
Sterling DC 19-64XK		163	177	S 36x5	S 36x10	Wau 6xK	6-3¾x4½	33.7	L	FP	Wau	Hex	Zen	V		L-N	D. B-L	B-L 51	U	4	Har	Own	C	D		57.78	D	Tim 15300	Ros	149¾	85¾	6500
5 Ton																																					
Acorn 100	4800	160		S 36x6	S 40x14	Bud YBUI	4-4½x6	32.4	L	PC	McC	Chi	Str	G	Bos-R		D. Ful	B-L 60	U	8	Pet	Tim 67700	W	F	Opt	Opt	A	Tim 1632	Ros			9000
Amer. La France V	5500	Opt	Opt	S 36x6	DS40x6	Own 5R	4-4¾x6	36.1	L	PS	Own	Bus	Zen	V	Bos-A	Bos A‡	D. Own	Own 5R	A	4	Own	Own 5R	W	F	10.0	54.4	B*	Own 5R		Opt	Opt	9600
*Am. La France Big Ch	6500	226	196	P 40x8	DP40x8	Own	6-4½x6	48.6	L	FP	Bud	G&O	Zen	V	D-R	D-R	D.	Mun	U	4	Spi	Own 16R	R	F	6.13	33.0	A	Own 16R	Own	209	139	11000
Atterbury 24E		174°	204	S 36x6	DS40x7	Con B7	4-5x6	40.0	L	FP	Pie	Fed	Zen	V	A-L	Bos-A	D. B-L	B-L 60 Max	A	7	Spi	Tim	W	F	11.6	110.7	A*	Tim	Gem	159¾	89¼	10225
*Autocar SCM	5000	162°	213	S 34x7‡	S 36x14	Own	6-4½x4¾	48.6	L	PC	Han	Own	Str	V	Bos-R	L-N	D. B-L	Own SCM	A†	4	Spi	Own M	R	F	9.74	71.0	B	Own CL	Ros	140	81	8600
Biederman		180°	200	S 36x7	S 36x14	Con 7T	6-4¾x6	43.3	L	PC	Han	Own	Zen	G	D-R	D-R	D. B-L	B-L 60	A	7	Spi	Tim	W	F	11.5	60.6	A*	Shu	Ros	164		9200
Brockway T		178°	208	S 36x6	S 40x14	Con B7	4-5x6	40.0	L	FP	K.P.	Bus	Zen	V	Eis	L-N‡	D. B-L	B-L 60 Max	A	7	Spi	Tim 68703S	W	F	10.0	95.0	B‡	Tim 17300	Ros	188	108½	10500
Clinton 120L		204	Opt	S 36x6	DS40x7	Bud BTU	4-5x6½	40.0	L	PC	Bud	Own	Zen	V	Spl	Bos-A	D. B-L	B-L 60	A	4	Blo	Tim 68702DHP	W	F	8.80	47.1	A†	Tim 17300	Ros	Opt	Opt	9550
Clinton 120LM		204	Opt	S 36x6	DS40x7	Bud BTU	4-5x6½	40.0	L	FP	Bud	Own	Zen	V	Spl	Bos-A	D. B-L	B-L 60 Max	A	7	Blo	Tim 68702DHP	W	F	8.80	83.6	A†	Tim 17300	Ros	Opt	Opt	9650
Clydesdale 2		176°		S 36x7	DS40x7	Con B7	4-5x6	40.0	L	FP	Own	Own	Zen	V	Bos-A	Bos A*	D. B-L	B-L 60 Max	A	7	Spi	Tim 6760	W	F	11.6	110.8	A*	Tim 17300	Ros			9750
*Coleman X-100		144	184	P 42x9	P 42x9	Bud BA6	6-4¼x5¼	40.8	L	FP	Bud	R-T	Zen	V	D-R	D-R	D. Ful	Ful RU16	U	8	Spi	Wis 122	R	F	8.54	140.3	E	Wis 122F	Ros	168	105	11200
*Coleman X100F		144	184	P 42x9	P 42x9	Bud GL	6-4¼x6	48.6	L	FP	Bud	Per	Str	V	D-R	D-R	D. Ful	Ful HU16	U	8	Spi	Wis 122	R	F	8.54	175.0	E	Wis 122F	Ros	168	105	11300
Commerce 100	5830	175	192	S 36x6	S 40x14	Bud BA6	6-4¼x5½	40.8	L	PC	Bud	Lon	Zen	V	A-L	A-L	D. Own	B-L 60 Max	A	7	Blo	Tim 68700DP	W	F	10.1	95.0	B	Tim 16302	Ros	144	94½	9600
Corbitt (33W6)		195	230	S 36x6	DS40x6	Con 21-R	6-4¾x4¾	45.9	H	FP	Non	Per	Zen	V	D-R	D-R	D. B-L	B-L 60 Max	A	7	Spi	Tim 68700-D	W	F	Opt	Opt	A‡	Tim 17300	Ros	162	109	9650
Corbitt (24W6)		195	230	P 36x8	DP36x8	Con 20R	6-4¼x4¾	40.8	H	FP	Non	Per	Zen	V	D-R	D-R	D. B-L	B-L 55	A	7	Spi	Tim 66704 DH	W	F	Opt.	Opt.	6†‡	Tim 16710H	Ros	162	109	9200
Denby 210		170		S 36x6	DS40x6	Con B5	4-4¾x6	36.1	L	PC		Lon	Zen	G	Eis		D. Ful	Ful HU	A	4	U-P	Cla		D	12.5	62.7		Tim	Ros			8590
Diamond T 1000	4420	170½°	200½	S 36x6	S 40x12	Her YXC2	6-4½x4¾	48.6	L	PC	Han	G&O	Zen	G	A-L	A-L	D. Cov	B-L	A	4	Spi	Tim 68700DH	W	F			B†‡	Tim 17300	Ros	140¼	90¾	9700
Dixon	4800	160		S 36x5	S 36x12	Her G	4-4¾x5¾	36.1	L	PC	Pie	G&O	Zen	V	Eis	D-R	D. Ful	Ful	A	8	Spi	Tim 6666	W	F	8.75	137.0	A	Shu 610	Ros			8100
Duplex M 5-7		Opt		P 34x7	DS36x7	Bud GL6	6-4½x6	48.6	L	FP		Mod	Str	V	A-L	A-L	D. B-L	B-L 70		7	Pet	Tim 68700	W	F	Opt	Opt	A*	Shu	Ros			10000
*Eagle 6-40		176		P 36x8	P 36x8	Her YXC	6-4¾x4¾	45.9	L	PC	Opt	Per	Zen	V	A-L	A-L	D. B-L	B-L 60	A	7	Pet	Tim 65706DH	W	F			G	Tim 15733H	Ros			8000
F.W.D MF6	5000	148		S 36x8	S 36x10	Wau	6-4¼x4¾	43.3	L	PC	Wau	Per	Zen	V	Eis	Non	O. H-S	Own	A	5	Blo	Own M	B	F	8.9	88.6	B	Own M	Ros	132	93	7775
*Freeman BA-156	5900	156		P 36x8	DP36x8	Bud BA6	6-4½x5½	47.5		FP	Bud	Lon	Str	V	Bos-R	Bos-R	D. Ful	Ful HU16	U	8†	Cle	Own	I	E	8.53	155.4	I	Own	Woh	112	84½	8490
*Freeman BA-186	6000	186	186	P 36x8	DP36x8	Bud BA-6	6-4½x5½	47.5	L	PC	Bud	Lon	Str	V	Bos-R	Bos-R	D. Ful	Ful HU-16	U	8		Own	I		8.53	155.4	I	Own	Woh	174	114½	8550
Garford 100	5830	175	192	S 36x6	S 40x14	Bud BA6	6-4½x5½	40.8	L	PC	Bud	Lon	Zen	V	A-L	A-L	D. Own	B-L 60 Max	A	7	Blo	Tim 68700DP	W	F	10.1	95.0	B	Tim 16302	Ros	144	94½	9600
Gen. Mot. T60S-6101	3960	140¾°	200¾	P 38x7	DP38x9	Buick	6-3½x5	31.5	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Tim 66704N	W	F	10.33	63.80	G*	Eat 526F	Jac	100	59⅜	6703
Gen. Mot. T60S-6102	3695	140¾°	200¾	P 36x8	DP36x8	Buick	6-3½x5	31.5	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Tim 66704N	W	F	10.33	63.80	G*	Eat 526F	Jac	100	59⅜	6673
Gen. Mot. K102-6001	4250	160°	184	S 36x6	S 40x14	Own 89	4-4½x6½	32.4	L	FP	K.P.	McC	Zen	V	Eis	D-R	D. Own	Mun	A	7	Own	Tim 67600	W	F	10.0	86.3	A‡	Tim 1732	Jac	144	87⅝	9245
Gotfredson RW-86A		Opt		P 38x9	DP38x9	Own	6-4½x4¾	48.6	L	FP	Pie	Lon	Str	O	D-R	D-R	D. B-L	B-L	A	7	Spi	Tim 66704DHP	W	F	Opt	Opt	I	Tim 16710H	Ros			
†G-P 82-6		192		B10.50/20	B10.50/20	Wau SRL	6-4¾x5¾	40.8	L	PC	Wau	Chi	Str	V	Bos-R	A-L	D. B-L	B-L 60 Max	A	7	M.M.	Tim 66720	W	F	8.25		I	Tim 16700-H	Ros			8200
†G-P 82-6-SW-6 wh		168		B10.50/20	B10.50/20	Wau 6SRL	6-4¾x5½	40.8	L	PC	Wau	Chi	Str	V	Bos-R	A-L	D. B-L	B-L 60 Max	A	7	M.M.	Tim SW-200	W	F			I	Tim 16300	Ros			9000
Gramm HY-236	6545	236°	236	P 36x8	DP36x8	Con 16H	6-4¾x5¾	54.1	L	PC	Pie	Per	Zen	O	A-L	A-L	D. Ful	Ful HU-16	U	4	Blo	Wis 12527KW	R	F	4.00	25.2	I*	Tim 1660	Ros	198½	141½	9600
Gramm 60	4745	153°	200	S 36x6	S 36x14	Her G	4-4¾x5¾	36.1	L	PC	Pie	Own	Zen	V	A-L	A-L	D. Ful	Ful H	A	8	Blo	Wis 1700	R	F	7.33	82.0	B*	Wis 30	Ros	138	83¾	8700
Gramm 60	4745	153°	200	S 36x6	S 36x14	Lyc TS	6-3¾x5	36.2	L	PC	Han	Own	Zen	V	A-L	A-L	D. Ful	Ful H	A	8	Blo	Wis 1700	R	F	7.33	82.0	B*	Wis 30	Ros	138	83¾	8700
Gramm-Bernstein 40		156°	176	S 36x5	DS36x5	Con L4	4-4½x5½	32.4	L	PC	Pie	Own	Str	G	Eis	A-L	D. Ful	Ful H1	A	8	Own	Wis	W	F	9.00	96.3	B*	Shu 610	Ros	144	87¾	8360
Gramm-Bernstein 50		168°	188	S 36x6	DS40x6	Con B7	4-5x6	40.0	L	PC	Pie	Own	Str	G	Eis	A-L	D. Ful	Ful H1	A	8	Own	Wis 1010F	W	F	11.75	125.7	B	Shu 610	Ros	162	97	9700
Guilder K6	5450	174	190	P 36x8	DP36x8	Her YXC2	6-4½x4¾	48.6	L	PC	Non	G&O	Zen	V	D-R	D-R	D. B-L	B-L 55	A	4	Spi	Tim 66700	W	F	Opt.	Opt.	D	Shu 650	Ros			7850
Hahn 67H		151		P 36x8	DP36x8	Con 21R	6-4¾x4¾	45.9	H	FP	Non	Chi	Zen	V	A-L	A-L	D. B-L	B-L 55	A	7	Blo	Wis 1500	R	F			I	Tim 16710 H	Ros	110		8842
Hahn 67HL		164	184	P 36x8	DP36x8	Con 21R	6-4¾x4¾	45.9	H	FP	Non	Chi	Zen	V	A-L	A-L	D. B-L	B-L 55	A	7	Blo	Wis 1500	R	F			I	Tim 16710H	Ros	168		9100
Hug 96		135		P 36x8	DP36x8	Bud DW6	6-3¾x5	33.7		PC	Bud	You	Zen	V	Bos-R	D-R	D. B-L	B-L 51	U	5	Blo	Wis 1255K	R	F	8.9	53.28	A	Shu 615	Ros	112⅞	80⅞	7400
Hug C97 6 Wheel		Opt.	Opt.	P 40x8	DP40x8	Bud BA6	6-4½x5½	40.8	L	FP	Bud	You	Zen	V	Bos-R	D-R	B-L	B-L 55	A	7	Blo	Wis 1257KW	R	F	8.64	82.08	I*	Shu 678	Ros	131½	80	
Indiana 41		172°	196	S 36x6	S 40x12	Her G	4-4¾x5¾	36.1	L	PC	Pie	Lon	Str	V	Eis	Opt	P. B&B	B-L 60 Max	A	7	Spi	Tim 68700SP	W	F	10.0	95.0	B*	Shu	Ros	156	98¼	9600
Int. Harvester HS 104C		160°	235	S 36x6‡	S 40x14	Ha S 153	4-4¾x5½	36.1	H	PC	Ha S	Own	Zen	G	Bos-R	D-R*	P. Own	Own	U	5	Own	Own	C	D	10.08	90.52	E*	Eat 74C	Own	120	81⅞	10595
Kleiber	5400	185		S 36x6‡	S 40x14‡	Con B5	4-4¾x6	36.1	L	FP	Non	R-T	Str	V	Bos-R	Non	D. B-L	B-L 60	A	4	Spi	Tim 6760	W	F	10.3	54.8	A	Tim 1730	Ros			10400
*Lange T, TA	5775	147⅝	167¾	P 40x8	DP40x8	Her YXC2	6-4½x4¾	48.6	L	PC	Pie	Own	Str	O	A-L	A-L	D. B-L	B-L 60 Max	A	4	Spi	Wis 1700	R	F	10.06		B	Tim 16300	Ros	154½	99½	9200
Larrabee 80		196⅛	206	P 36x8	DP36x8	Con 21R	6-4¾x4¾	40.8	H	PC	Con	Per	Zen	G	A-L	A-L	D. B-L	B-L	A	7	Spi	Tim	W	F	8.5	80.75	F	Tim	Ros	168	104	
Luedinghaus		160°	186	S 36x6‡	S 40x6‡	Wau EU	4-5x6¾	40.0	L	PC	Wau	Own	Str	V	Eis	Opt‡	D. B-L	B-L 60	A	4	Spi	Tim 67600	W	F	11.6		A*	Shu	Ros	144	90	9505
Macsar G1		186	204	S 36x6	DS40x6	Wis RBU	4-5x6	40.0	L	PC	Pie	Own	Str	V	Eis	D-R	D-R	B-L 60	A	4	Spi	Tim 6760D	W	F	10 2	54.8	A*	Tim 17300	Ros	180	101¾	8975
*Mack AC	4950	168°		S 36x5	DS40x5	Own AC	4-5x6	40.0	L	PS	Own	Own	Str	G	Bos-R	N-E‡	P. Own	Own AC	J	4	Spi	Own AC	C	D	'7.54	48.4*	D*	Own AC	Own	156	104	9200°
*Mack AK	5250	174°		S 36x5	DS36x5	Own AC	4-5x6	40.0	L	PS	Own	Own	Str	G	Bos-R	N-E‡	P. Own	Own AK	A	4	Spi	Own AK	R	F	6.91	45.3*	G‡	Own AK	Own	156	105	9000
*Mack AK	5250	174°		S 36x5	DS36x5	Own AC	4-5x6	40.0	L	PS	Own	Own	Str	G	Bos-R	N-E‡	P. Own	Own AK	J	4	Spi	Own AK	C	D			F‡	Own AK	Own	156	105	8950
*Moreland EX7	4405	182		B 9.00/20	DB9.00x20	Her WXC2	6-4½x4½	40.8	L	PC	Non	Lon	Zen	O	A-L	A-L	P. B-L	B-L 51	U	4	Cle	Tim 65706-H	W	F	7.75	85.40	G‡	Tim 16710H	Ros	156	99	6500
Oneida E-9		180		S 36x8	DS40x7	Wau GU	4-5½x6¼	46.2	L	PS	Non	Mod	Str		Apo	A-L	B-L	B-L 60	A	4	Pet	Tim 67660	W	F	10.1		A	Tim 1730	Ros			9400
Oshkosh FHX	5475	146	165	S 36x8	S 36x12	Her YXC2	6-4½x4¾	48.6	L	PC	Her	Own	Str	V	Bos-R		D. B-L	B-L	A	7	Blo	Own FH	R	F	9.6	91.2	B	Own FH	Han	114½	83½	9200
Pierce-Arrow RD	5400	162	198	S 36x6	DS36x7	Own RD	4-4½x6¾	32.4	T	FP	Own	Own	Str	P	D-R	D-R	D. Own	Own RD	A	4	Spi	Own RD	W	F	7 8	40.4	B*	Own RD	Own	139¼	78¾	8750
Rehberger D		186	198	S 36x6	S 40x14	Bud BTU	4-5x6½	40.0	L	PC	K-P	Bus	Zen	V	Eis	D-R	D. B-L	B-L 60	A	4	Spi	Tim 6760	W	F	10.25	54.8	A*	Tim 17300	Ros	172½	109	10010
Republic 35		170°		S 36x6	S 36x14	Wau DU	4-4½x6¼	32.4	L	PC	Wau	Own	Zen	V	Bos-A	A-L	D. Ful	Ful	A	8	U-M	Eat	I	D	10.26	95.5	B*	Shu	Han	145¾	92	7500
*Schacht 40	3400	174	199	P 36x8	DP36x8	Her WXC2	6-4½x5½	40.8	L	PC			Zen		A-L	A-L	D. Ful	Ful MGU	U	4	Spi	Own	R	F	8.00	52.00	G	Shu 5572	Ros	Opt.	Opt.	7000
Selden 67C		164	184	P 36x8	DP36x8	Con 21R	6-4¾x4¾	45.9	H	FP	Non	Own	Str	V	D-R	D-R	D. B-L	B-L	A	7	Blo	Wis 1500	R	F	10.8		G	Tim	Ros	132	84	9600
Service 100	5830	175	192	S 36x6	S 40x14	Bud BA6	6-4½x5½	40.8	L	PC	Bud	Lon	Zen	V	A-L	A-L	D. Own	B-L 60 Max	A	7	Blo	Tim 68700DP	W	F	10.1	95.0	B	Tim 16302	Ros	144	94½	9600
Sterling EW 23-64 KS		174	192	S 36x5	S 40x10	Wau 6KS	6-4x4¾	38.4	L	FP	Wau	Hex	Zen	V		L-N	D. B-L	B-L 55	U	4	Har	Tim 66601D	W	F	9.5	50.82	A	Tim 16300	Han	158	97	7950
Sterling DC 23-64 KS		166	180	S 36x5	S 36x12	Wau 6KS	6-4x4¾	38.4	L	FP	Wau	Hex	Zen	V		L-N	D. B-L	B-L 55	U	4	Har	Own	C	D		49.12	D	Tim 15300	Ros	147 0	86 0	8400
Stewart 31X	4990	165	235	S 36x6	DS36x6	Wau	6-4¾x5½	45.9	L	PS		Mod	Str	V	D-R	D-R	D. Ful	Ful	A	8	Spi	Tim	W	F	10.5	15.1	G	Sal	Ros	136¼	79½	8400
United 100		150½	170½	S 36x6	S 40x14	Her G	4-4¾x5¾	36.1	L	PC	Pie	Per	Zen	G	Eis	A-L	D. B-L	B-L 60	A	4	Blo	Wis 1800	R	F	11.2	106.4	A*	Shu 610	Ros	143½	81	8900
*Walter FHS	7600	Opt	136	P 40x8	DP40x8	Own 6	6-4½x5¾	48.6	L	PC	Own	Own	Zen	V	Bos-R	D-R	Own	Own	U	5	Own	Own	R	D	8.50	85.0	E*	Own	Ros	126	96	9000

Key of abbreviations page 94

Trade Name and Model	General: Chassis Price	Standard Wheelbase (inches)	Maximum Wheelbase furnished	Tire Size: Front (inches)	Tire Size: Rear (inches)	Engine: Make and Model	Number of Cylinders Bore and Stroke	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)	Fuel System: Carburetor (Make)	Fuel System: Fuel Feed	Electrical System: Ignition System (Make)	Electrical System: Generator and Starter (Make)	Clutch: Type and Make	Gearset: Make and Model	Gearset: Location	Gearset: No. of Forward Speeds	Universal (Make)	Rear Axle: Make and Model	Rear Axle: Final Drive	Rear Axle: Type	Gear Ratio: Total Reduction in High	Gear Ratio: Total Reduction in Low	Brakes, Location	Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase: Cab to rear of frame	Standard Wheelbase: Cab to rear axle	Chassis Weight (lbs.) (stripped)
5 Ton—Cont'd																																
Ward La France 5D	.....	Opt	Opt	S 36x6	DS40x7	Wau EU	4-5x6¼	40.0	L	PC	Wau	Own	Str	G	Bos R	A-L	D-BL	B-L 60	A	7	Spi	Tim 66702D	W	F	10.3	97.8	B‡	Tim 16302	Ros	Opt	Opt	9900
Ward La France 5B6	.....	Opt	Opt	S 36x6	DS40x7	Wau AB	6-4½x5¾	48.6	L	PC	Wau	Own	Str	G	L-N	L-N	D-BL	B-L 60	A	7	Spi	Tim 66702D	W	F	10.3	97.8	B‡	Tim 16302	Ros	Opt	Opt	10200
Whitecomb 6-wheeler	.....	Opt	Opt	P 38x9	P 38x9	Wis Z	6-4½x5	48.6	I	FP	Non	Mod	Str	O	L-N	L-N	D. Ful	Ful	U	4	Own	Own	W	F	Opt	Opt	G	Own	Ros	.....	.....	.....
White 52	5100	174°	245	S 36x6	S 40x12	Own GRB	4-4¼x5¾	28.9	L	FP	Own	Own	Zen	V	.....	L-N‡	P. Own	Own GRBA	U	5	Spi	Own	R	F	11.7	92.3	B*	Own	Own	166½	105⅝	9184
White 55	4765	174°	215	S 36x6‡	DS40x6	Own GRB	4-4¼x5¾	28.9	L	FP	Own	Own	Zen	V	.....	L-N‡	P. Own	Own 4B	U	4	Spi	Own	R	F	10.11	66.1	B*	Own	Own	167⅝	107⅛	8895
Witt-Will AA	.....	172°	192	S 36x6	DS40x7	Con B5	4-4¾x6	36.1	L	FP	Non	Own	Zen	G	Eis	D-R	D. B-L	B-L 60	A	7	Spi	Tim 67600	W	F	10.2	53.3	A*	Tim 1732B	Ros	139	89	9350
5½ Ton and Over																																
Acme 150	.....	192	.....	S 36x7	DS40x8	Con B7	4-5x6	40.0	L	PC	Pie	Per	Str	V	Eis	A-L	D. B-L	B-L 60	A	7	Blo	Tim 68700DP	W	F	10.0	95.0	B	Tim 17300	Ros	168⅝	105⅞	9650
Acme 151	.....	193	.....	S 36x7	DS40x8	Con 15H	6-4½x5¾	48.6	L	PC	Pie	Per	Str	V	Eis	A-L	D. B-L.	B-L 60	A	7	Blo	Tim 68700DP	W	F	10.0	95.0	B	Tim 17300	Ros	167¾	104	10000
Amer. La France Z6½	5750	Opt	Opt	S 36x7	DS40x7	Own 5R	4-4¾x6	36.1	L	PS	Own	Bus	Zen	V	Bos-A	Bos A‡	D. Own	Own 5R	A	4	Own	Own 5R	W	F	10.0	54.4	B*	Own 5R	.....	Opt	Opt	9600
Amer. La France U7½	6000	Opt	Opt	S 36x7	DS40x8	Own 5R	4-4¾x6	36.1	L	PS	Own	Bus	Zen	V	Bos-A	Bos A‡	D. Own	Own 5R	A	4	Own	Own 5R	W	F	11.67	63.5	B*	Own 5R	.....	Opt	Opt	9800
*Brockway 290	.....	182	212	P 38x7	S 40x14	Con-Brock	6-4¾x5¾	54.2	L	FP	Pie	Lon	Str	E	L-N	L-N	D. B-L	B-L 70–7	A	7	Spi	Tim 68703D	W	F	10.1	95.0	I°	Shu 678-5	Ros	162	99	10750
*Brockway 640-6 Wheel	.....	212	224	P 38x7	S 36x10	Con-Brock	6-4¾x5¾	54.2	L	FP	Pie	Lon	Str	E	L-N	L-N	D. B-L	B-L 70	A	7	Spi	Tim SW-400	W	F	9.67	90.9	I°	Shu 678-5	Ros	216	129	14000
Chicago 70C	.....	Opt	Opt.	S 36x6	S 40x14	Wau EU	4-5x6¼	40.0	L	FP	Wau	Chi	Zen	G	Apo	A-L‡	D. B-L	B-L 70 Max	A	7	Spi	63795H-6H	W	F	11.6	61.7	B†‡	Tim 16300	Ros	Opt	Opt	8800
Chicago 36D	.....	173°	Opt	P 34x7	P 36x8	Wau KU	6-4¼x4¾	43.3	...	FP	Wau	Chi	Zen	G	A-L	A-L	D. B-L	B-L 55 Max	A	7	Spi	66797DH–8DH	W	F	17.1	108.2	B†‡	Tim 17300	Ros	Opt	Opt	13000
Chicago 36D	.....	168½°	Opt	S36x6	S 36x10	Wau EU	4-5x6¼	40.0	L	FP	Wau	Chi	Zen	G	A-L	A-L	D. B-L	B-L 70 Max	A	7	Spi	66797DH–8DH	W	F	17.1	108.2	B†‡	Tim 17300	Ros	Opt	Opt	13000
Chicago 64D	.....	175¾°	Opt	S 36x6	S 36x12	Wau 6AB	6-4½x5¾	48.6	...	FP	Wau	Chi	Zen	G	A-L	A-L	D. B-L	B-L 70 Max	A	7	Spi	Tim65793-4DH	W	F	7.25	68.2	B†‡	Tim 16302	Ros	.....	.....	12480
Chicago 66D	.....	Opt	163	P 36x8	DP36x8	Wau KU	6-4¼x4¾	43.3	...	FP	Wau	Chi	Zen	G	A-L	A-L	D. B-L	B-L 70 Max	A	7	Spi	Tim65793-4DH	W	F	7.25	68.2	B†‡	Tim 17300	Ros	.....	.....	12600
Chicago 46D	.....	Opt	175¾	P 36x8	DP36x8	Wau AB	6-4½x5¾	48.6	...	FP	Wau	Chi	Zen	G	A-L	A-L	D. B-L	B-L 70 Max	A	7	Spi	Tim65793-4DH	W	F	7.25	68.2	B†‡	Tim 17300	Ros	.....	.....	12600
Chicago 56D	.....	Opt	175¾	P 36x8	S 40x14	Bud BTU	4-5x6½	40.0	L	PC	Bud	Own	Zen	V	Spl	D-R	D. B-L	B-L 60	A	4	Blo	Tim 68702DHP	W	F	8.8	83.6	A*	Tim 17300	Ros	Opt	Opt	9500
Clinton 120SM	.....	172	Opt	S 36x6	S 40x14	Sterling	6-5½x6	66.1	L	FP	Ste	Per	Sch	P	N-E	N-E	B-L	B-L 714	U	8	.....	Wis HD	R	D	8.54	180.0	I°	Wis HD	Ros	Opt	Opt	13750
†Coleman F-200	.....	144	148	P 44x10	DP44x10	Sterling	6-5½x6	66.1	L	FP	Ste	Per	Sch	P	N-E	N-E	B-L	B-L 714	U	8	.....	Wis HD	R	D	8.54	180.0	I°	Wis HD	Ros	Opt	Opt	13750
†Coleman F-200	.....	144	148	P 44x10	DP44x10	Sterling	6-5½x6	45.9	H	FP	Non	Per	Zen	V	D-R	D-R	D. B-L	B-L 60 Max	A	7	Spi	Tim 68700-D	W	F	Opt	Opt	A‡	Tim 17300	Ros	162	109	9650
Corbitt 33W6	.....	195	230	S 36x6	DS40x6	Con 21-R	6-4⅝x4¾	40.8	L	PC	Bud	Lon	Zen	V	A-L	A-L	D. Own	B-L 60 Max	A	7	Blo	Tim 68700DP	W	F	10.1	95.0	B	Tim 16302	Ros	144	94½	9600
*Commerce 100ZB	5830	175	.....	S 36x6	S 40x14	Bud BA6	6-4½x5½	51.3	L	PC	Han	G&O	Zen	V	A-L	A-L	D. Cov	B-L 60 Max	A	7	Spi	Tim 65794	W	F	9.33	88.6	G°	Tim 17300	Ros	138¾	94¾	11700
Diamond T-1600 6 whl	6220	174½	210	P 36x8	DP36x8	Her YXC3	6-4⅝x4¾	60.0	L	PC	Wau	G&O	Zen	G	Bos-A	A-L	D. B-L	B-L 70	A	7	Spi	Tim 65793	W	F	9.67	91.8	G°	Tim	Ros	103	166	13000
Diamond T-2500 6 whl	8000	194°	214	S 36x7	S 36x12	Wau 6RB	6-5x5¾	33.7	L	PC	Opt	Per	Zen	V	A-L	A-L	D. B-L	Cov W4C	U	4	Pet	Tim 68W	W	F	.....	.....	G	Tim 14703H	Ros	.....	.....	5500
†Eagle 6-20SW-6 wh	.....	176	.....	P 32x6	DP32x6	Her	6-3¾x4½	38.4	L	PC	Opt.	Per	Zen	V	A-L	A-L	D. B-L	B-L 55	A	4	Pet	Tim SW	W	F	.....	.....	G	Tim 15733H	Ros	.....	.....	8200
†Eagle 6-30-SW-6 wh	.....	176	.....	P 34x7	DP34x7	Her	6-4x4½	45.9	L	PC	Opt.	Per	Zen	V	A-L	A-L	D. B-L	B-L 60	A	7	Pet	Tim SW	W	F	.....	.....	G	Tim 15733H	Ros	.....	.....	9500
†Eagle 6-40-SW-6 wh	.....	176	.....	P 36x7	DP36x8	Her	6-4⅝x4¾	48.6	L	PC	Wau	Per	Zen	V	D-R	D-R	D. B-L	B-L 55&60	U&A	7	Spi	Tim 65700	W	F	6.87	123.4	B°	Tim 17300	Ros	213½	147¾	12870
*Fageol 10-66A 6 whl	8850	229½	.....	P 36x6	DP36x6	Wau AB	6-4½x5¾	48.6	L	PC	Wau	Per	Zen	V	D-R	D-R	D. B-L	B-L 55&60	U&A	7	Spi	Tim 66700	W	F	6.87	123.4	B°	Tim 17300	Ros	213½	149¾	13700
*Fageol 10-66-C 6 whl	9100	231½°	.....	P 36x6	DP36x6	Wau AB	6-4½x5¾	48.6	L	PC	Wau	Per	Zen	V	D-R	D-R	P. B&B	B-L 60	A	7	Pet	Tim 68700DP	W	F	11.7	111.2	B*‡	Own	Gem	151	87⅛	9750
*Federal X8 7½ Ton	5085	162	186	S 36x6	S 40x14	Con B7	4-5x6	40.0	L	FP	Pie	Lon	Zen	V	Bos-A	D-R	P. B&B	B-L 60	A	7	Pet	Tim 68700DP	W	F	11.7	111.2	B*‡	Own	Gem	151	87⅛	10000
*Federal 7½Ton X8R	5810	162	186	P 40x8	DP40x8	Con 21R	6-4⅝x4¾	45.9	I	PC	Con	Lon	Zen	V	D-R	D-R	P. B&B	B-L 60	A	7	Pet	Tim 68700DP	W	F	11.7	111.2	B*‡	Own	Gem	151	87⅛	10000
F.W.D. X6	6500	170	.....	P 36x8	P 36x8	Wau	6-4¼x4¾	43.3	L	PC	Wau	Per	Zen	V	Eis	Non	O. H-S	Own	A	5	Blo	Own X	B	F	8.9	88.6	B	Own M	Ros	180	137	9500
*Freeman GL 7½ Ton	7200	156	.....	P 38x9	DP38x9	Bud GL6	6-4½x6	48.6	L	FP	Bud	Lon	Str	E	Bos-R	Bos-R	D. Ful	Ful HU16	U	8†	Cle	Own	I	F	8.53	155.4	E	Own	Woh	117	78½	10000
†Freeman BAS-156 6 T	6650	156	.....	P 38x9	DP38x9	Bud BA6	6-4½x5½	47.5	L	PC	Bud	Lon	Str	E	Bos-R	Bos-R	D. Ful	Ful HU-16	U	4	Cle	Own	I	...	8.53	155.4	...	Own	Woh	174	114½	8900
†FreemanBAS-1865½-7T	6750	186	.....	P 38x9	DP38x9	Bud BA-6	6-4½x5½	47.5	L	PC	Bud	Lon	Str	E	Bos-R	Bos-R	D. Ful	Ful HU-16	U	4	Cle	Own	I	...	8.53	155.4	...	Own	Woh	177	111	.....
†Freeman GL-186	7400	186	.....	P 38x9	DP38x9	Bud GL-6	6-4½x6	48.6	L	PC	Bud	Lon	Str	E	Bos-R	Bos-R	D. Ful	Ful HU-16	U	4	Cle	Own	I	...	8.53	155.4	...	Own	Woh	177	111	.....
*Garford 100ZB	5830	175	.....	S 36x6	S 40x14	Bud BA6	6-4½x5½	40.8	L	PC	Bud	Lon	Zen	V	A-L	A-L	D. Own	B-L 60 Max	A	7	Blo	Tim 68700DP	W	F	10.1	95.0	B	Tim 16302	Ros	144	94½	9600
Gen. Mot. T60S-6101	3960	140⅝°	200¾	P 38x7	DP38x9	Buick	6-3⅝x5	31.5	I	PC	Han	Lon	Mar	O	D-R	D-R	D.	Mun	U	4	Spi	Tim 66704N	W	F	10.33	63.80	G*	Eat 526F	Jac	100	59⅜	6703
Gen. Mot. K102-6001	4250	160	184	S 36x6	S 40x14	Own 89	4-4½x6½	32.4	L	FP	K.P.	McC	Zen	V	Eis	D-R	D. Own	Mun	A	7	Own	Tim 67600	W	F	10.0	86.3	A‡	Tim 1732	Jac	144	87⅝	9245
Gotfredson RW104A	.....	169	193	S 36x6	DS40x8	Bud BBU	4-5x6½	40.0	L	PC	Pie	Lon	Zen	V	Bos-R	D-R	D. B-L	B-L 60 Max	A	7	Spi	Tim 68700DP	W	F	11.66	110.77	B	Tim 17302	Ros	.....	.....	12000
Gotfredson RW106A	.....	173	196⅛	S 36x6	DS40x8	Own	6-4⅝x4¾	48.6	L	PC	Pie	McC	Str	O	Bos-R	D-R	D. B-L	B-L 60 Max	A	7	Spi	Tim 68700DP	W	F	10.0	95.0	B	Tim 17302	Ros	.....	.....	12400
Gramm 60	4745	153°	200	S 36x6	S 36x14	Her G	4-4¾x5¾	36.1	L	PC	Pie	Own	Zen	V	A-L	A-L	D. Ful	Ful H	A	8	Blo	Wis 1700	R	F	7.33	82.0	B*	Wis 30	Ros	138	83¾	8700
Gramm 60	4745	153°	200	S 36x6	S 36x14	Lyc TS	6-3⅞x5	36.2	L	FP	Han	Own	Zen	V	A-L	A-L	D. Ful	Ful H	A	8	Blo	Wis 1700	R	F	7.33	82.0	B*	Wis 30	Ros	138	83¾	8700
Gramm-Bernstein 50	.....	168°	188	S 36x6	DS40x6	Con B7	4-5x6	40.0	L	PC	Pie	Own	Str	G	Eis	A-L	D. Ful	Ful H1	A	8	Own	Wis 1010F	W	F	11.75	125.7	B	Shu 610	Ros	162	97	9700
G-P 92-6-SW 6 whl	.....	Opt.	Opt.	B 10.50/20	B12.75/20	Wau 6AB	6-4½x5¾	48.6	L	FP	Wau	Chi	Str	V	Bos-R	A-L	D. B-L	B-L 70	A	7	M.M.	Tim SW300	W	F	8.50	.....	I	Tim 17300	Ros	.....	.....	12500
G-P 100-6-SW-6 whl	.....	Opt.	Opt.	B 12.00/20	B13.50/20	Wau 6RB	6-5x5½	60.0	L	FP	Wau	Chi	Str	V	Bos-R	A-L	D. B-L	B-L 70	A	7	M.M.	Tim SW400	W	F	.....	41.2	I	Tim 17300	Ros	.....	.....	16000
†G-P 92-6	.....	158	195	B10.50/20	D10.50/20	Wau 6AB	6-4½x5¾	48.6	L	PC	Wau	Chi	Str	V	Bos-R	A-L	D. B-L	B-L 70 Max	A	7	M.M.	Tim 68704	W	F	8.73	.....	B	Tim 17300	Ros	.....	.....	9600
Guilder L 6-7	5650	170	.....	S 36x6	S 40x14	Bud BTU	4-5x6½	40.0	L	PC	Pie	G&O	Zen	G	Eis	Non	D. B-L	B-L 60	A	4	M-E	Wis 1500	R	F	9.10	.....	A*	Shu 650	Ros	.....	.....	9600
*Hendrickson SSW	6100	Opt	Opt	P 36x8	P 36x8	Bud BA6	6-4½x5½	40.8	L	FP	Bud	Chi	Zen	O	Spl	A-L	D. B-L	B-L 60	A	7	Blo	Own	W	F	8.25	78.38	6†‡	Tim 16302	Ros	Opt	Opt	8450
*Hendrickson MSW	6400	Opt	Opt	P 38x7	DP38x7	Bud BA6	6-4½x5½	40.8	L	FP	Bud	Chi	Zen	O	Spl	A-L	D. B-L	B-L 60	A	7	Blo	Own	W	F	Opt	.....	G†‡	Tim 16302	Ros	Opt	Opt	10800
*Hendrickson SW10	6900	Opt	Opt	S 36x7	S 40x12	Wau EU	4-5x6¼	40.0	L	FP	Wau	Chi	Zen	V	Spl	Bos-R †	D. B-L	B-L 70	A	7	Blo	Own	W	F	10.25	96.35	G‡	Tim 17300	Ros	Opt	Opt	12500
*Hendrickson SW610	7300	Opt	Opt	S 36x7	S 40x12	Bud GL6	6-4½x6	48.6	L	FP	Bud	Chi	Zen	O	Spl	Bos-R †	D. B-L	B-L 70	A	7	Blo	Own	W	F	10.25	96.35	G‡	Tim 17300	Ros	Opt	Opt	13000
Hug 98-6wheel	.....	Opt.	Opt.	P 40x8	DP40x8	Bud GF6	6-4⅝x6	54.1	L	FP	Bud	You	Zen	O	Bos-R	D-R	B-L	B L 70	A	7	Blo	Wis 1527W	R	F	8.1	76.04	I°	Shu 678	Ros	.....	.....	.....
Indiana 641-7	.....	184°	208	S 36x6	S 40x12	Wis Z	6-4½x5	48.6	H	FP	K-P	Lon	Str	V	Eis	A-L‡	D. B-L	B-L 70 Max	A	7	Spi	Tim 68700SP	W	F	10.0	95.0	B*	Shu 610	Ros	156	98¼	10000
Indiana 641-7	.....	182	212	P 38x7	S 40x14	Con 16H	6-4⅝x5¾	54.2	L	FP	Pie	Lon	Str	E	L-N	L-N	B-L	B-L 70	A	7	Spi	Tim 68703D	W	F	.....	.....	I°	Shu 678-5	Ros	162	99½	10750
Indiana 290	.....	212	224	P 38x7	S 36x12	Con 16H	6-4⅝x5¾	54.2	L	FP	Pie	Lon	Str	E	L-N	L-N	B-L	B-L 70	A	7	Spi	Tim SW-400	W	F	.....	.....	I°	Shu 655-18	Ros	216	129⅝	14000
Indiana 640-6whl	.....	212	224	P 38x7	S 36x12	Con 16H	6-4⅝x5¾	54.2	L	FP	Pie	Lon	Str	E	L-N	L-N	B-L	B-L 70	A	7	Spi	Tim 68700	W	F	10.0	95.0	B*	Tim 17300	Ros	Opt.	Opt.	10000
Kenworth 10 ton	5975	181	Opt	S 36x7	DS40x8	Wau GU	4-5⅜x6¼	46.2	L	FP	Non	Per	Str	V	Bos-R	D-R	D. B-L	B-L 60 Max	A	7	Spi	Tim SW-300W	W	F	7.25	87.0	G°	Tim 16302	Ros	240	145	11500
Kenworth 345–6Wh	8600	245	245	P 36x8	DP36x8	HaS 160	6-4¼x5½	43.3	L	PC	HaS	Per	Zen	V	D-R	D-R	D. B-L	B-L 55&60	U&A	8	.....	Wis 4600	W	F	8.25	78.37	G	Tim 16302	Ros	162	105	10000
Le Moon H60	6200	192	192	S 36x6	S 36x8	Wau 6KU	6-4¼x4¾	43.3	...	FP	Wau	Chi	Str	V	A-L	A-L	D. B-L	B-L 60	A	7	Opt	Wis 4600	W	F	8.25	78.37	G	Tim 16302	Ros	162	105	10000
Le Moon H100	7300	180	180	S 36x7	S 40x12	Wau 6AB	6-4½x5¾	48.6	...	FP	Wau	Chi	Str	V	L-N	L-N	D. B-L	B-L 70	A	7	Spi	Tim 66791	W	F	9.66	90.8	G	Tim 17302	Ros	130	93	13000
Maccar 126-6 Wheel-6	.....	180½	221½	P 36x8	P 36x8	Buda BA-6	6-4½x5⅛	41.0	L	PC	Pie	Per	Str	V	D-R	D-R	D. B-L	B-L 60	A	7	.....	.....	W	...	6.4	78.4	G‡	Tim 16302	Ros	.....	.....	9200
*Mack AC7½	6000	168°	.....	S 36x7	DS40x7	Own AC	4-5x6	40.0	L	PS	Own	Own	Str	G	Bos-R	N-E‡	P. Own	Own AC	J	4	Spi	Own AC	C	D	10.9*	67.1	D*	Own AC	Own	156°	104°	10150
Mack AP7½	9500	191	.....	S 36x7	DS40x8	Own AP	6-5x6	60.0	L	PS	Own	Own	Str	G	Bos-R	N-E‡	P. Own	Own AC	J	4	Spi	Own AC	C	D	.....	Opt	D‡	Own AC	Own	.....	.....	.....
Mack AC 6-wheel 10	7500	.....	.....	S 36x7	S 40x12	Own AC	4-5x6	40.0	L	PS	Own	Own	Str	G	Bos-R	N-E‡	P. Own	Own AC	J	4	Spi	Own AC	C	D	.....	Opt	D	Own AC	Own	.....	.....	.....
Mack AP 6-wheel 10	1200	.....	.....	S 36x7	S 40x12	Own AP	6-5x6	60.0	L	PS	Own	Own	Str	G	Bos-R	N-E‡	P. Own	Own AP	J	4	Spi	Own AC	C	D	.....	Opt	A	Own AC	Own	.....	.....	.....
*Moreland ED6	5285	196	.....	P 36x8	P 36x8	Her WXC2	6-4½x4½	40.8	L.	PC	Non	Lon	Zen	O	A-L	A-L	P. B-L	B-L 51	U	5	Cle	Own	W	F	8.75	96.42	G‡	Tim 16300	Ros	168	113	8500
*Moreland H6	5200	196	.....	P 36x8	DP36x8	Her YXC	6-4⅝x4¾	45.9	L	PC	Non	Lon	Zen	O	A-L	A-L	P. B-L	B-L 55	U	4	Cle	Tim 66704WP	W	F	9.00	99.18	A†	Tim 16710H	Ros	168	113	8000
*Moreland HDS6	6585	220	.....	B9.00/20	DB9.00/20	Her YXC3	6-4⅝x4¾	51.3	L	PC	Non	Lon	Zen	O	A-L	A-L	P. B-L	B-L 55	U	4	Cle	Own	W	F	8.5	93.67	G‡	Tim 16300	Ros	192	137	10500

| | | |

Key of abbreviations page 94

Trade Name and Model	General					Engine									Electrical System		Clutch	Gearset			Universal (Make)	Rear Axle			Gear Ratio		Brakes, Location	Front Axle Make and Model	Steering Gear (Make)	Standard Wheelbase		Chassis Weight (lbs.) (stripped)
	Chassis Price	Standard Wheelbase (inches)	Maximum Wheelbase furnished	Tire Size: Front (inches)	Tire Size: Rear (inches)	Make and Model	Number of Cylinders Bore and Stroke	N.A.C.C. Rated H.P.	Valve Arrangement	Oiling System	Governor (Make)	Radiator (Make)	Fuel System: Carburetor (Make)	Fuel System: Fuel Feed	Ignition System (Make)	Generator and Starter (Make)	Type and Make	Make and Model	Location	No. of Forward Speeds		Make and Model	Final Drive	Type	Total Reduction in High	Total Reduction in Low				Cab to rear of frame	Cab to rear axle	
Relay 60	4480	142	.....	P 36x6	S 36x12	Bud BUS	6-4x5½	38.4	L	PC	Non	Own	Zen	V	A-L	A-L	D. B-L	B-L 51	U	5	Blo	Own 60	R	F	7.88	58.5	G	Tim 1573H	Han	.....	.....	7350
Schacht 5 Ton	.....	130	.....	S 34x5	S 34x10	Wau XK	6-3¾x4½	33.7	L	PC	.....	Own	Zen	G	L-N	L-N	D. Ful	Ful	U	4	Spi	Own	R	F	9.42	45.22	G	Own	Ros	.....	.....	6200
Schacht 7 Ton	.....	130	.....	S 36x5	S 36x12	Wau KU	6-4¼x4½	45.9	L	PC	.....	Own	Zen	G	Bos-A	Non	D. B-L	Ful	U	4	Spi	Own	R	F	10.3	65.0	B	Own	Own	.....	.....	7500
Schacht 13 Ton	.....	130	.....	S 36x6	DS40x7	Wau SRL	6-4¾x5½	45.9	L	PC	.....	Own	Zen	G	Bos-A	Non	D. B-L	B-L	U	7	Spi	Own	W	F	14.0	88.2	B	Own	Ros	.....	.....	10000
Schacht 15 Ton	.....	130	.....	S 36x7	DS40x8	Wau SRL	6-4¾x5½	45.9	L	PC	.....	Own	Zen	G	Bos-A	Non	D. B-L	B-L	U	7	Spi	Own	W	F	14.0	88.2	B	Own	Ros	.....	.....	10600
*Walter FK..D	6200	Opt	118	P 38x7	DP38x7	Own 6	6-4½x4¾	48.4	L	PC	Own	Own	Zen	V	Eis	D-R	. Own	Own	U	5	Own	Own	R	D	8.50	85.0	E*	Own	Ros	108	78	7500
*Walter FH..D	7600	Opt	118	P 40x8	DP40x8	Own 6	6-4½x5¼	48.6	L	PC	Own	Own	Zen	V	Eis	D-R	Own	Own	U	5	Own	Own	R	D	8.50	85.0	E*	Own	Ros	108	78	9000
*Walter FHRD	8000	Opt	118	P 42x9	DP42x9	Own 6	6-4½x5¾	48.6	L	PC	Own	Own	Zen	V	Eis	D.R	Own	Own	U	5	Own	Own	R	D	8.50	85.0	E*	Own	Ros	106	78	10000
White 52T	4700	129½	129½	S 36x5‡	DS40x5	Own GRB	4-4½x5¾	28.9	L	FP	Own	Own	Zen	V	.....	L-N‡	P. Own	Own 4B	U	4	Spi	Own	R	F	11.7	76.5	B*	Own	Own	94⅝	62⅝	8236
White 51A	3875	134	134	S 36x5‡	S 36x8‡	Own GRB	4-4½x5¾	28.9	L	FP	Own	Own	Zen	V	.....	L-N‡	P. Own	Own 4B	U	4	Spi	Own	S	½	7.14	46.7	B*	Own	Own	80	48½	6045

KEY OF ABBREVIATIONS

For addresses of manufacturers listed below see Chilton Catalog and Directory

Wheelbase

*More than one wheelbase furnished.
Var—Varies with Wheelbase

Tires

B—Balloon.
P—Pneumatics standard equip.
DP—Dual pneumatics standard equipment.
S—Solids.
DS—Dual solids.
•—Tires at extra cost.
‡—Pneumatics can be furnished at extra cost.

Engine

*Models also furnished with engine under seat.
Bud—Buda Co.
Con—Continental M. Corp.
D—Head and Side.
FP—Full Pressure to all bearings including wrist pins.
H—Overhead.
HaS—American Car & Fdy. Co.
Her—Hercules Motor Corp.
I—In Head.
Jackson—Master M. T. Mfg. Co.
L—L-Head.
Lyc—Lycoming M. Corp.
PC—Pressure to all crankshaft and connecting-rod bearings.
PG—Pump, Gravity & Splash.
PS—Pressure with splash.
SP—Circulating splash.
T—T-Head.
Wau—Waukesha M. Co.
Wis—Wisconsin M. Mfg. Co.
X—Sleeve.

Governor

‡—At extra cost
Bud—Buda
Con—Continental M. Corp.
Dup—Eisemann Magneto Corp.
Han—Handy Gov. Co.
K. P.—Handy Gov. Co.
McC—E. R. Klemm.
Mon—Monarch Gov. Co.
Non—Not Supplied.
Pha—Bethlehem Fabricators, Inc.
Pie—Pierce Governor Co.
Sim—Eisemann Magneto Corp.
Ste—Sterling
Wau—Waukesha M. Co.

Radiator

Bus—Bush Mfg. Co.
Chi—Chicago Mfg. Co.
Fed—Fedders Mfg. Co.
G&O—G. & O. Mfg. Co.
Har—Harrison Rad. Corp.
Hex—Hexcel Rad. Co.
Lon—Long Mfg. Co.
McC—McCord Rad. & Mfg. Co.
McK—McKinnon Dash Co.
Mod—Modine Mfg. Co.
Per—Perfex Corp.
R-T—Rome-Turney Rad. Co.
U. S.—U. S. Cartridge Co.
Whe—Wheeler Radiator Mfg. Co.
You—Young Rad. Co.

Fuel System

Car—Carter Carburetor Co.
Det—Detroit Lubricator Co.
E—Electric Pump.
G—Gravity.
Joh—Johnson
Mar—Marvel Carbureter Co.
O—Mechanical Pump.
P—Pressure.
Sch—Wheeler Schebler Car. Co.
Ste—Detroit Lubricator Co.
Str—Stromberg Motor Dev. Co.
Til—Tillotson Mfg. Co.
V—Vacuum.
Zen—Zenith-Detroit Corp.

Electrical Systems

‡—Generator & Starter at Extra Cost.
†—Starter not supplied, Generator at Extra Cost.
•—Starter at Extra Cost.
A-L—Electric Auto-Lite Corp.
Apo—Apollo Magneto Corp.
Bos-A—Am. Bosch Magneto Co.
Bos-R—Rob. Bosch Magneto Co.
DJ—DeJon
D-R—Delco-Remy Co.
Eis—Eisemann Magneto Corp.
L-N—Leece-Neville Co.
N-E—North East Elect. Co.
Non—Not Supplied.
Spl—Splitdorf Electrical Co.

Clutch and Gearset

•—Other ratios optional.
†—Auxiliary two-speed transmission optional.
‡—Aux. 2-speed Trans. Std.
A—Amidships.
B & B—Borg & Beck Co.
B-L—Brown-Lipe Gear Co.
Cla—Clark.
Cot—Cotta Trans. Corp.
Cov—Covert Gear Co.
Det—A. J. Detlaff Co.
D-G—Detroit Gear & Mach. Co.
D—Disk.
Dur—Durston Gear Corp.
Ful—Fuller & Sons Mfg. Co.
H-S—Merchant & Evans Co.
J—Unit with Jackshaft.
Jon—Jones Clutch & Gear, Inc.
Lon—Long Mfg. Co.
M. M.—Mechanics Mach. Co.
Mun—Muncie Products Div. General Motors Corp.
O—Disk in Oil.
P—Plate.
Roc—Rockford Drill. Mach. Co.
U—Unit with Engine.
W-G—Warner Gear Co.
Yell—Yellow Sleeve V. E. Wks.

Universal

B.G.—Universal Machine Co.
Blo—Blood Bros. Mach. Co.
Cle—Cleveland St. Prod. Corp.
Har—Spicer Mfg. Co.
M-E—Merchant & Evans Co.
M. M.—Mechanics Machine Co.
Pet—Cleveland Univ. Parts Co.
Pic—Pick Mfg. Co.
Spi—Spicer Mfg. Co.
Sp-Bl—Spicer and Blood Bros.
The—Thermoid Rubber Co.
ThSp—Thermoid & Spicer
U-M—Universal Machine Co.
U-P—Universal Products Co.

Front and Rear Axles

•—Two speed
½—Semi-Floating.
¾—Three-Quarter Floating.
B—Straight Bevel.
Cla—Clark Equip. Co.
Col—Columbia Axle Co.
Con—Continental Axle Co.
C—Chain.
D—Dead.
Eat—Eaton Axle Co.
F—Floating.
I—Internal Gear.
R—Double Reduction.
S—Spiral Bevel.
Sal—Salisbury Axle Co.
Shu—Shuler Axle Co., Inc.
Tim—Timken Det. Axle Co.
Tor—Eaton Axle & Spring Co
Vul—Vulcan Steam Forging Co.
W—Worm.
Wis—Wisconsin Axle Co.

Brake

§—Hydraulic front, mechanical rear
A—Rear Wheels only.
B—Driveshaft and Rear Wheels.
D—Jackshaft and Rear Wheels.
E—4-Wheel Brakes.
F—4-Wheel Brakes with emergency on jackshaft.
G—4-Wheel Brakes with emergency on driveshaft.
H—4-Wheel Brakes with emergency on rear wheels.
I—4-Wheel Brakes with emergency on propeller shaft.
J—Driveshaft.
K—Service & Emergency Brakes on four wheels.

Service Brake Type

•—Mechanical.
†—Hydraulic.
‡—Vacuum Booster.
*Compressed Air.

Steering Gear

CAS—Columbus G. & P. Co.
D-G—Detroit Gear & Mach. Co.
Dod—Dodge Bros. Co.
Gem—Gemmer Mfg. Co.
Han—Hannum Mfg. Co.
Jac—Saginaw Steering Gear, Div. General Motors Corp.
Lav—Hannum Mfg. Co.
Ros—Ross Gear & Tool Co.
War-Warner Gear Co.
Woh—Wohlrab Gear Co.

17 PROFITABLE SALES

The Barton-Warner Company of Sioux City, Iowa, became Coleman Dealers September 20th, 1929. Since then they have sold 17 Colemans in their territory. If you have handy your December, 1929 copy of this magazine, you can read in it about the Coleman St. Paul dealer and his 51 sales in eight months of last year.

Those sales were *profitable* to those dealers. Coleman does *anything* any other truck can do. It does many things no other truck will attempt. It sells on *performance*, not on price, and the buyer cheerfully pays the dealer a profit because he knows he is getting greater value per dollar than any other truck can give him.

Take yourself out of the "price" and "trade-in" class. Invest your time in a truck that gets the order through performance and gets repeat business because it pays its way. We have some good territory available. Communicate with the nearest office.

COLEMAN MOTORS CORPORATION

Main Plant
Littleton, Colorado

Eastern Plant
Washington, D. C.

COLEMAN

FOUR WHEEL DRIVE

Dumps to the Left

PUBLIC ACCEPTANCE

The testimony of highway officials, contractors and individual users of

"COMMERCIAL" 3-WAY HOISTS AND BODIES

BASED ON ACTUAL OPERATING EXPERIENCE tells the whole story.

Dumps to the Rear

They are the men who KNOW. They depend upon the unfailing performance of their equipment for the successful completion of their contract—completion at a LOWER COST and—the anticipated profit. And the

"COMMERCIAL" DOES NOT FAIL

Dumps to the Right

Its unequalled flexibility to the various kinds of service arising daily with dump-truck users obviates the necessity for numerous implements—shortens the operating time and enhances the final profits.

Simple, practical reasons that appeal to the every-day user.

ADAPTABLE TO ALL DUMP TRUCK CHASSIS. BULLETIN "F" DESCRIBES THE COMPLETE LINE.

COMMERCIAL REAR DUMP BODIES

Rear Dump

REAR DUMP FEATURES

- Down-folding gate.
- Operates automatically.
- Double-acting.
- Top Hung for spreading.
- Self Cleaning seal.
- One adjustment for all wear.
- Operated by three hinges.

Manufactured by:

THE COMMERCIAL SHEARING & STAMPING COMPANY

YOUNGSTOWN, OHIO

Pioneers and Leaders in 3-Way Dumping Equipment

why TIE UP *your Money* in a LARGE STOCK OF *PARTS?*

There's a Way to Get the Parts You Need—When You Need Them—Without Carrying a Large Inventory

A complete supply of parts for your specialized equipment—a supply every bit as accessible as if it were under your own roof—this is what United Motors now offers truck operators all over the country!

By means of this nationwide service you can get *genuine*, *guaranteed* replacements for any of the products listed on the sign above—the kind of parts which will stand up under the hardest usage, and reduce your maintenance costs to the minimum. And, if you wish, you can take your specialized service problems to the expert mechanics in the employ of United Motors. In other words, you can have either *genuine* parts or *authorized* service on short notice, for there is a Direct Branch or Authorized Service Station of United Motors near you, ready to rush your order the moment it is received.

Why not adopt this means of reducing your maintenance costs, slashing your overhead, and minimizing "time out" for repairs? A request will bring you a copy of the United Motors Service Directory, showing the nearest source of this service. Address the Direct Branch in any of the following cities: Atlanta, Boston, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Denver, Des Moines, Detroit, Indianapolis, Kansas City, Los Angeles, Memphis, Milwaukee, Minneapolis, New Orleans, New York, Oakland, Omaha, Philadelphia, Pittsburgh, Richmond, San Francisco, St. Louis, Seattle, Toronto.

Nothing *Finer* Can Be Said of Any Motor Vehicle Than, It is -

LYCOMING MOTORS

LYCOMING MANUFACTURING CO.
WILLIAMSPORT, PENNSYLVANIA

Lycoming's Vast Resources, Experience and Skill Are Dedicated to Leadership in Fine Motor Building

Sell Transportation

Alert, farsighted motor car or truck dealers are going to sell transportation and transportation only in 1930. Instead of branching out into other lines they will handle those products and that equipment which naturally tie up with cars and trucks. Chief among these in volume and in profits are Fruehauf Trailers. It is only natural for automotive dealers to expect the most business—the smallest sales expense and the largest profits from selling equipment which, by selling facilities, training and experience, they are equipped to handle. The market for Trailers is large and ready to buy. And, in the face of present conditions, Fruehauf economies, both in first cost and in daily operating expense, are more than ever essential.

You owe it to your business to investigate the Fruehauf Trailer proposition. Just fill in and return the coupon.

Semi-Trailers
4 Wheel Trailers
Pole Trailers
Heavy Duty Carryalls

FRUEHAUF TRAILERS

FRUEHAUF TRAILER COMPANY

DETROIT, MICHIGAN

Oldest and Largest Manufacturers of Trailers
Fruehauf Trailer Company of Canada, Limited—Toronto, Can.

I should like to know more about Fruehauf Trailers and the Fruehauf selling plan.

Name of Individual.....

Name of Firm.....

Street Address.....

City.....State.....

Watch for Announcement!

New DeLuxe Line of SCHACHT TRUCKS

THE new DeLuxe Line of SCHACHT Trucks...greater in value, more complete, greater in sales appeal than any other line of today...will be announced in the April issue of Commercial Car Journal and Operation & Maintenance.

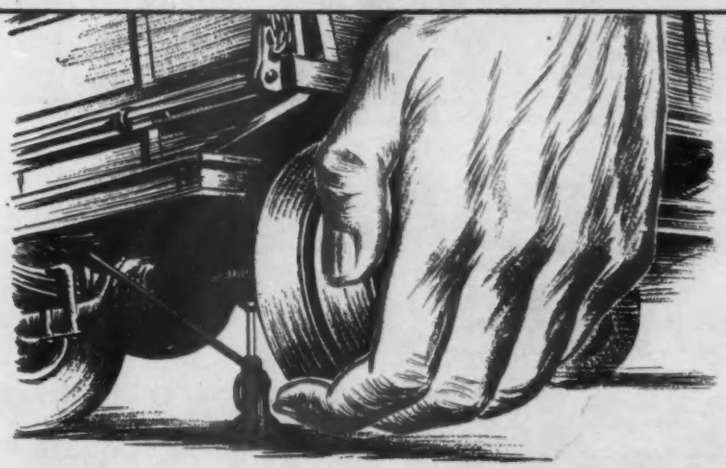
Dealers! Here is a line that will sell on sight—supreme in APPEARANCE . . . PERFORMANCE . . . VALUE! Get in touch with us at once.

THE LeBLOND-SCHACHT TRUCK CO.

Cincinnati, Ohio

Successful Motor Truck Manufacturers for Over 20 Years

MAKES EVERY TRUCK DELIVER MORE TONNAGE



They never come too BIG for Blackhawk 1-hand lift

BIG or little. Heavy or light. Loaded or not. It's all the same to a Blackhawk Hydraulic—the tremendously powerful modern jack that lifts load and all by mere finger pressure, and lowers automatically.

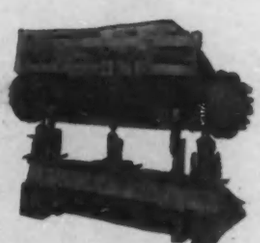
A flat tire has no worries for the driver who has a Blackhawk jack along. Punctures can't cause much delay for him. He's rid of the slow, back-breaking work a mechanical jack requires. No more get out and get under. No matter what the load, it's just a one-hand lift with a Blackhawk.

A Blackhawk makes every truck deliver more payloads per month. That's why these modern jacks are standard on the leading heavy trucks, and truck fleets. For quick, easy jacking, longer life, and lower costs — equip with Blackhawk.

Mail coupon for proof of Blackhawk advantages.

BLACKHAWK MFG. COMPANY
MILWAUKEE *Also world's largest manufacturer of socket wrenches* WISCONSIN

A full line of jacks—1 to 75 tons capacity — a model for every truck and truck service need, each a one-hand lifter.



Besides the tire, brake and wheel jobs, you need Blackhawks for pressing on gears and bushings, for straightening axles, and bending operations.

BLACKHAWK HYDRAULIC JACKS

BLACKHAWK MFG. CO.
Dept. C. O., Milwaukee, Wis.

Send literature on truck and shop jacks. ☐ Include wrench folder.

Name.....

Address.....

.....

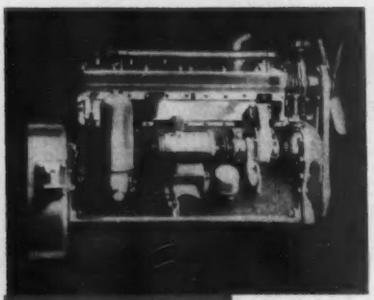
.....

SEALED AGAINST *dirt* ..... 17 OTHER REAL ADVANTAGES

Every man associated with motor transportation has had plenty of experience with the costliness of dirt and dust. Invariably dust and dirt represent the beginning of the most expensive overhaul—not to mention the cost of "out-of-service."

Buda "Hivelo" Engines not only overcome this source of expense—but offer you many other advantages of equal importance and economy.

For instance, the main oil distributing line — which is rifle drilled the entire length of the crankcase—eliminates *all* loose oil pipes.



All the main bearings, upper and lower, are replaceable without removing the crankshaft. An economy feature that will save operators thousands of dollars yearly.

The valve tappets are clustered in the Buda "Hivelo" series—and can be readily serviced by removing cover. Another savings feature that should be appreciated by truck and bus owner everywhere.

From fan to flywheel — you will find that Buda "Hivelo" Engines are engineered to eliminate existing faults. They represent progress in engine construction.

Get full particulars regarding Buda "Hivelo" Engines. If you have not already received a copy of new bulletin with complete specifications . . . Ask for it today.

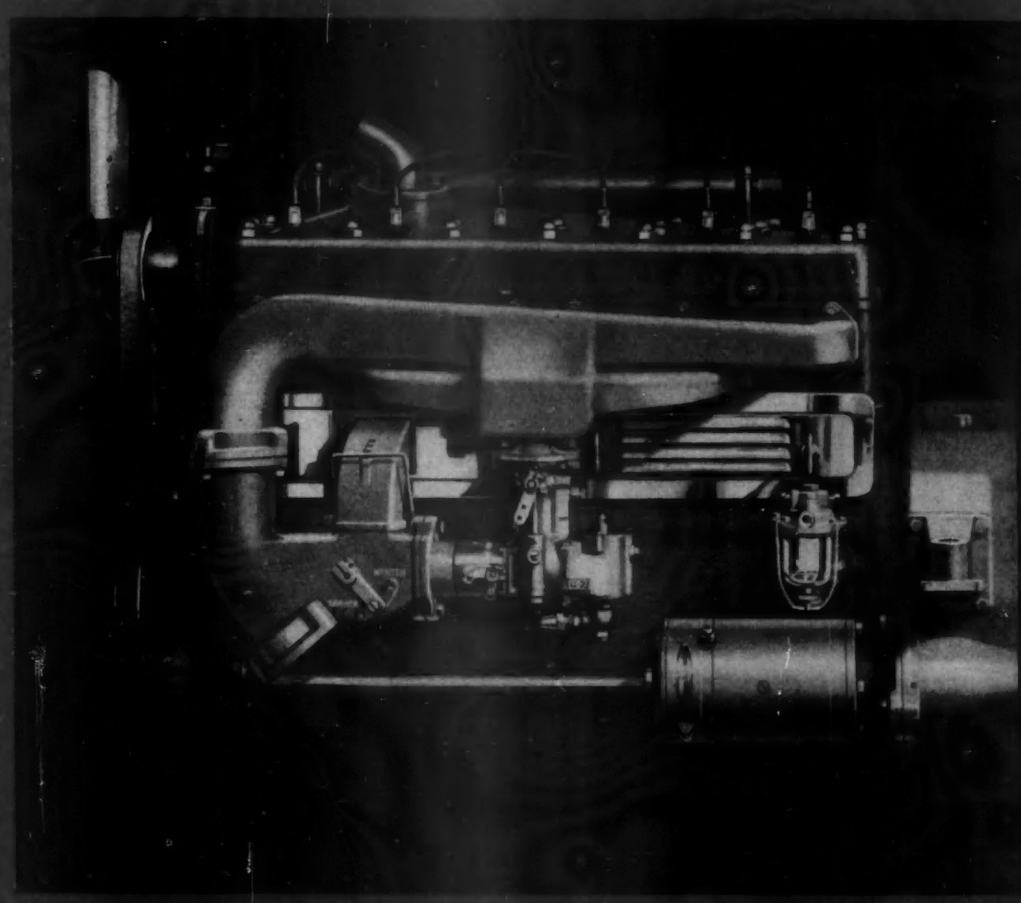
TO MEET TODAY'S DEMAND

1. Sealed against dirt.
2. Built-in air cleaner.
3. Crankcase ventilation. Relieves crankcase pressures and aids in preventing oil leaks.
4. Specially designed dirt-proof breather and oil filler cap.
5. Crankcase and cylinders of chrome nickel alloy iron. Longest wearing iron known today.
6. Main oil distributing line rifle-drilled full length of crankcase. No loose oil pipes.
7. Rifle-drilled, long-centered connecting rods. Positive lubrication of piston pin with oil under pressure.
8. Seven-bearing, close-coupled crankshaft of large diameter. To withstand excessive shocks and permit of extremely smooth operation.
9. High velocity combustion chamber of new and advanced design.
10. High velocity water pump of large capacity. Stainless steel shaft and leak-proof bearing.
11. Safety legs on engine housing. Prevents breakage of engine housing or crankcase by extreme impact on front of frame.
12. High velocity lubricating system.
13. Balanced distribution manifold—equipped with hot spot and heat control.
14. All main bearings, upper and lower, replaceable without removing crankshaft.
15. Valve tappets clustered—for accessibility in assembling and service.
16. Provision for oil filter.
17. Provision for fuel pump.
18. Removable cover for cylinder water jackets. To permit removing corrosion or deposits around cylinders.

THE BUDA COMPANY
HARVEY (Chicago Suburb) ILL.

BUDA ENGINES "HIVELO" SERIES

COMPLETELY



BUDA LEADERSHIP STILL PREVAILS

SEALED AGAINST *dirt* ..... 17 OTHER REAL ADVANTAGES

Every man associated with motor transportation has had plenty of experience with the costliness of dirt and dust. Invariably dust and dirt represent the beginning of the most expensive overhaul—not to mention the cost of "out-of-service."

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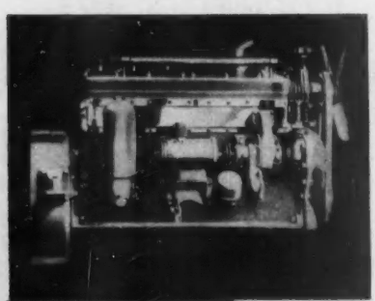

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The valve tappets are clustered in the Buda "Hivelo" series—and can be readily serviced by removing cover. Another savings feature that should be appreciated by truck and bus owner everywhere.

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TO MEET TODAY'S DEMAND

1. Sealed against dirt.
2. Built-in air cleaner.
3. Crankcase ventilation. Relieves crankcase pressures and aids in preventing oil leaks.
4. Specially designed dirt-proof breather and oil filler cap.
5. Crankcase and cylinders of chrome nickel alloy iron. Longest wearing iron known today.
6. Main oil distributing line rifle-drilled full length of crankcase. No loose oil pipes.
7. Rifle-drilled, long-centered connecting rods. Positive lubrication of piston pin with oil under pressure.
8. Seven-bearing, close-coupled crankshaft of large diameter. To withstand excessive shocks and permit of extremely smooth operation.
9. High velocity combustion chamber of new and advanced design.
10. High velocity water pump of large capacity. Stainless steel shaft and leak-proof bearing.
11. Safety legs on engine housing. Prevents breakage of engine housing or crankcase by extreme impact on front of frame.
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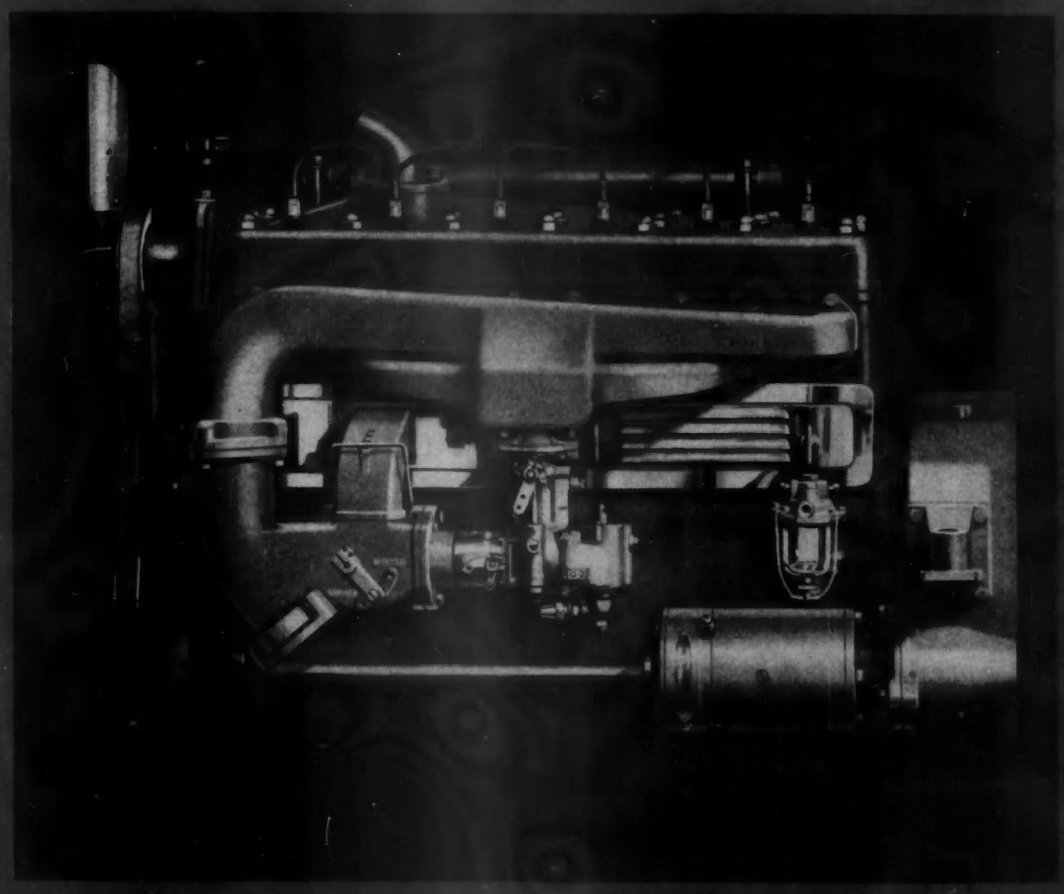
13. Balanced distribution manifold—equipped with hot spot and heat control.
14. All main bearings, upper and lower, replaceable without removing crankshaft.
15. Valve tappets clustered—for accessibility in assembling and service.
16. Provision for oil filter.
17. Provision for fuel pump.
18. Removable cover for cylinder water jackets. To permit removing corrosion or deposits around cylinders.

THE BUDA COMPANY
HARVEY (Chicago Suburb) ILL.

BUDA ENGINES "HIVELO" SERIES

COMPLETELY



BUDA LEADERSHIP STILL PREVAILS

THE NEW HEAVYWEIGHT CHAMPION

YOU don't see it, but it's there — like the punishing close-range body-blow of the champion boxer: the steady hammering of distribution costs by motor trucks; day after day busily "doing their stuff."

For all types of heaviest duty hauling the Timken Six-Wheel Unit is a real champion; with two silent Timken Worm Drive Axles driving "tandem."

You'll recognize instantly the sheer economic logic of the Timken Six-Wheel idea. Four drive-wheels; four-wheel brakes—or even six-wheel brakes; much bigger load capacities; greatly reduced impacts of wheels on pavements — through these advantages the Timken Six-Wheel Unit achieves new and impressive records in transportation economy.

A good many wide-awake truck operators, alive to these benefits, didn't wait to be sold. They're using Timken Six-Wheel Units Now.

THE TIMKEN-DETROIT AXLE COMPANY
DETROIT, MICHIGAN

The instant demand for Timken Six-Wheel Units reaffirms Timken Worm Drive's basic soundness and adaptability. Where lowest operating costs are essential, Timken Worm Drive Axles are silently dependable — under motor trucks, motor buses, fine motor cars; and under street cars.

TIMKEN SIX WHEEL UNIT

A FOUR-WHEEL WORM DRIVE UNIT FOR SIX-WHEEL VEHICLES

HERE IS A TRUCK

of true one-ton capacity and true Diamond T quality and style, selling—and we mean SELLING at $785.00

Chassis at the Factory

BEVEL DRIVE

1-TON MODEL 200	$785
1-TON MODEL 215	$885
1½-TON MODEL 290	$1475
2-TON MODEL 303	$1745
2½-TON MODEL 551	$2250

WORM DRIVE

2½-TON MODEL 503	$2660
3-TON MODEL 602	$3440
3½-TON MODEL 700	$3740
5-TON MODEL 1000	$4420

WORM DRIVE SIX-WHEELERS

4-TON MODEL 801	$4140
8-TON MODEL 1600	$6220
8-TON MODEL 1601	$7500
10-12-TON MODEL 2500	$8000

Prices, Chassis at the Factory

If you care anything about who's going to get the cream of the truck business in your locality, write for the facts about this new leader of the finest line of motor trucks that money can buy. Diamond T's references are 25 years of sound, solid, progress—profitable to us and to Diamond T dealers. Full evidence will be sent you—write or wire today.

Cordially yours,

The Diamond T Motor Car Company, Chicago

C. A. Tilt, President

American

BRAKEBLOKS

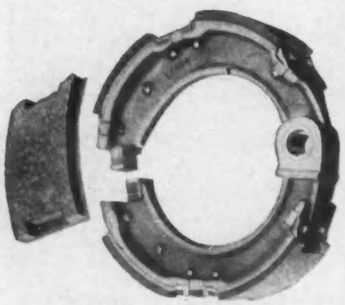
CUT THE COST OF RESURFACING BRAKES
CUT THE COST OF DRUM REPAIR
CUT THE COST PER STOP

"AS LONG as American Brakebloks continue to give the kind of service they are now giving, we'll never go back to any other kind of brake surfacing material. They wear longer; they give us smoother stops; and they eliminate a great deal of drum repair."

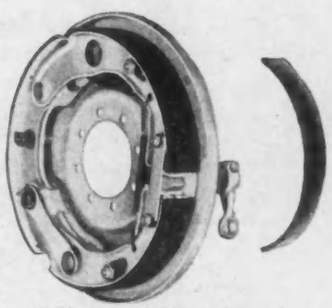
These are the words of the service superintendent for one of the largest bus operators in the Middle West. They express, not only his views, but those of hundreds of other truck and bus operators throughout the country—enthusiastic users of American Brakebloks.

This modern brake material cuts the cost per stop by doing more braking work, by requiring many less adjustments, and by lowering brake maintenance costs. Hard and rigid, it is non-compressible even at many times the most severe braking pressure. It will not wedge, warp, grab, burn or smoke. It contains no metallic content to cut or score drums. Its frictional qualities are constant throughout its entire thickness, assuring velvet stops even after it is worn wafer thin.

Begin now to save part—a large part—of your brake maintenance costs. Install American Brakebloks. They are available for all brake assemblies at N. A. P. A. distributors.



(Left) Keeper Type American Brakeblok for heavy duty trucks and buses. (Right) Keeper type installed on brake shoes.



Full coverage type American Brakeblok for light trucks and buses; and typical installation on internal mechanical brake.

AMERICAN BRAKE MATERIALS CORPORATION
Industrial and Automotive Division American Brake Shoe & Foundry Co.
4660 Merritt Avenue · Detroit, Michigan, U. S. A.
Sales Offices: Chicago New York San Francisco

American Brakebloks—Original Equipment on part or all of the production of over 30 manufacturers of trucks and buses

FLEXIBLE SHAFT and ATTACHMENTS

Patented
Jan. 15, 1924.

No. 1005.
With high speed ½ h. p. motor, 3450 R. P. M. on 60 cycle. Net $121.50

The Sioux Lambs Wool Polisher, used with the Sioux Flexible Shaft and Angle Work Head, takes the drudgery out of polishing jobs.

Polishing Mechanically can be done with the Sioux!

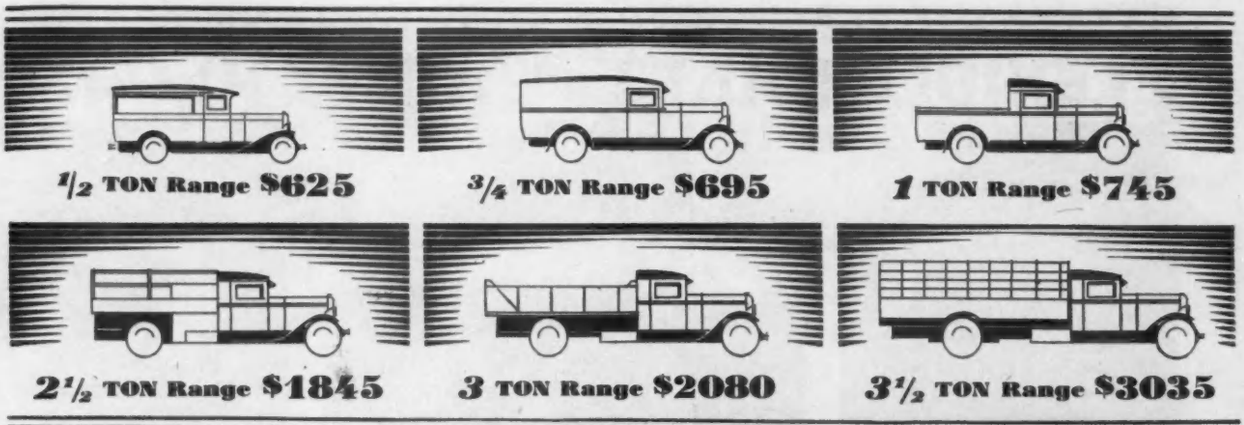
A perfect job of cleaning and polishing can now be done easily and quickly. The Sioux slow speed angle work head and lambs wool polishing attachments were especially designed for use with the Sioux Flexible Shaft for polishing operations. The slow spindle speed prevents "burning" or other damage to lacquered or painted surfaces. The Sioux Angle work head is compact and light in weight, easy to handle and, with its two handles, is under positive control of operator. The "Sioux" way is the modern way—away ahead of the long tedious hand polishing method. Ask for complete instructions for polishing cars mechanically with the Sioux Flexible Shaft and polishing attachments.

Your Jobber Sells Them.

ALBERTSON & CO. INC.,
Sioux City, Iowa, U. S. A.

SIOUX
Trade Mark Reg U.S. Patent Office

STANDARD THE WORLD OVER

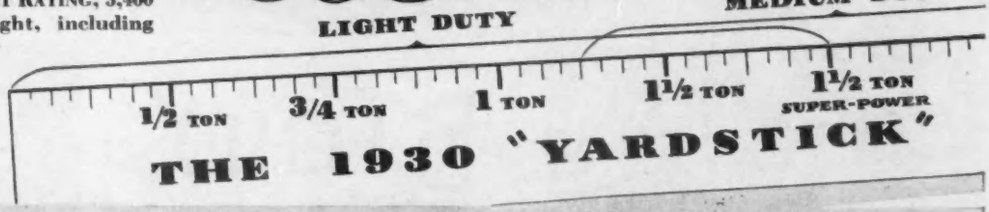


1/2 TON Range $625 | 3/4 TON Range $695 | 1 TON Range $745

2 1/2 TON Range $1845 | 3 TON Range $2080 | 3 1/2 TON Range $3035

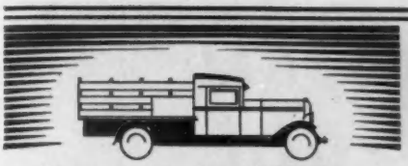
3/4 Ton Range $695

Model T-15A; STRAIGHT RATING, 5,400 lbs. (total gross weight, including load); price, chassis, f. o. b. Pontiac, Mich.

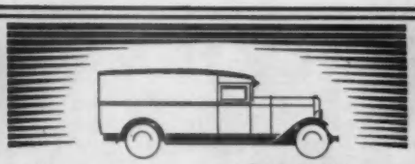


THE 1930 "YARDSTICK"

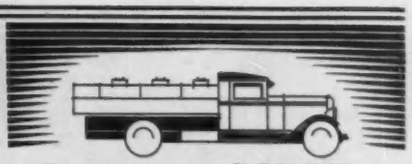
FOR 1930! GENERAL



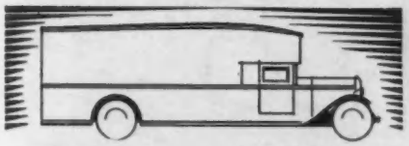
1½ TON Range $960



1½ TON Range $1265
Super-power

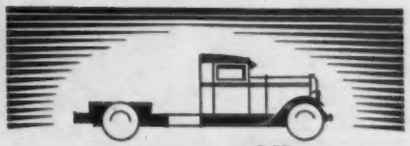


2 TON Range $1545



4 TON Range $3795

5 TON Range $5885
Six-wheeler



TRACTORS up to 15 TONS

NEVER BEFORE:
EVERY TRUCK-REQUIREMENT
so exactly and efficiently met!

• • •

11 Basic Models
33 Chassis
118 different types

This 1930 line brings, to *five new capacity ranges*, the proved economy, durability and all-'round profit-earning power of General Motors Trucks.

For every truck job that exists, it now provides a *modern* vehicle *accurately suited to the work and loads.*

Eleven basic models, 33 chassis, 118 different types! There is no other line of trucks to compare with it. Every model in the whole line is a modern 6-cylinder truck.

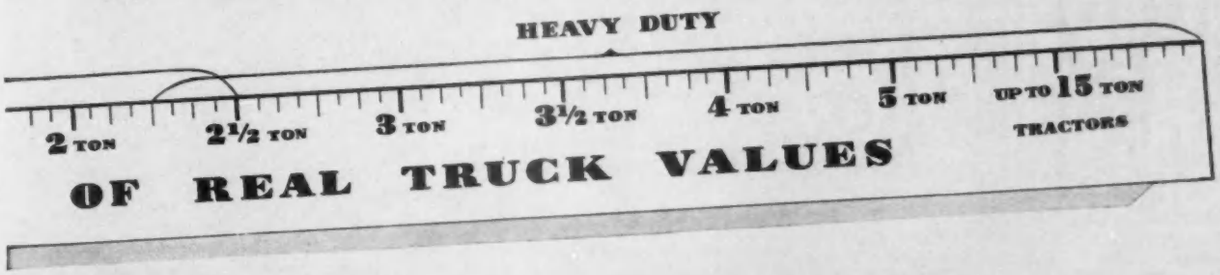
Remarkable balance of ruggedness to power and safe speed marks every model . . . Proper load distribution . . . Frames huskier than ever—medium- and heavy-duty models have unique "stress absorber" reinforcement . . . Four wheel *truck* brakes perfected by a year of special tests . . . One of the year's biggest developments in steering . . . Tire equipment determined by the most efficient method in all truck practice . . . A remarkable degree of standardization.

Cabs are by long odds the finest ever put on trucks, regardless of price.

Such a line at such prices is made possible by just one thing: the great volume, and the unusual engineering and manufacturing facilities of General Motors Trucks.

No more salable line of vehicles has ever been offered. It provides for *every* requirement in the great and growing field of commercial transportation. To any man in the automotive business we recommend an investigation of the profit-possibilities offered by 1930 General Motors Trucks!

GENERAL MOTORS TRUCK CO., Pontiac, Mich.
(*Subsidiary of* Yellow Truck & Coach Mfg. Co.)
GENERAL MOTORS TRUCKS, YELLOW CABS AND COACHES. *Factory Branches, Distributors, Dealers—in 1500 principal cities and towns.*



MOTORS TRUCKS

THE 1929 SLUMP WILL PROVE TO BE A BLESSING IN 1930

HOW TO MAKE YOUR SHOP MAKE MONEY

the Timid and Penny-pinchers will suffer—but the strong and the Clear-thinkers will profit as never before! The 1929 slump is going to make a lot of your competitors do some faulty thinking. They are afraid and they have lost the sense of proportion. They'll let their equipment "run down" and they'll squeeze and twist this way and that until, as a logical result, they'll be boosting the cost per mile instead of cutting it.

Now, they will have what seems to be a very good reason for acting that way. They'll argue, for instance, that *Maintenance* is one of their biggest expenses, and that, this year, they must stop spending so much money on maintenance. So far, *good!* We hope YOU will cut your Maintenance costs, too—but we hope you don't make a mistake *in the way you do it.*

Let your competitors cut costs—or try to cut costs—by simply ignoring maintenance work that needs doing. But choose the better plan for yourself. Cut YOUR costs by preventing little jobs from growing into big ones. Cut your costs by cutting the time per job. Cut your costs by keeping old equipment good enough to earn its way another year. But don't cut out thinking *straight.* And don't miss the chance to profit by the mistakes some of your competitors are sure to make.

This booklet, written to help the public repairman, contains mighty useful thoughts about maintenance costs. Ask for your copy.

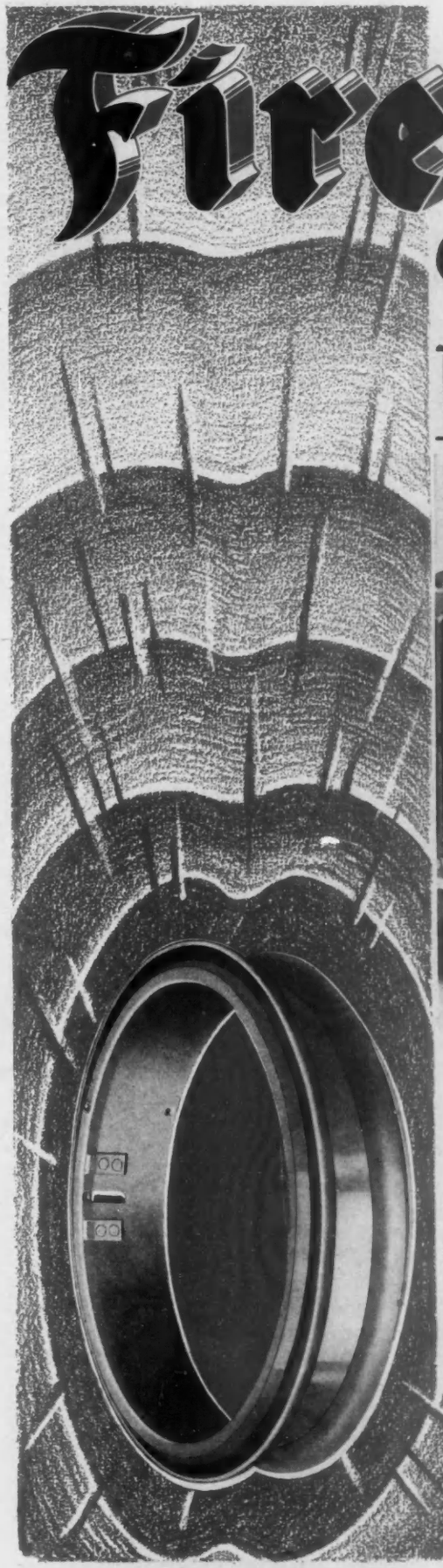
Of course, we want you to use U. S. products. But not unless you know absolutely how and where they will help you to save some of the money you now spend.

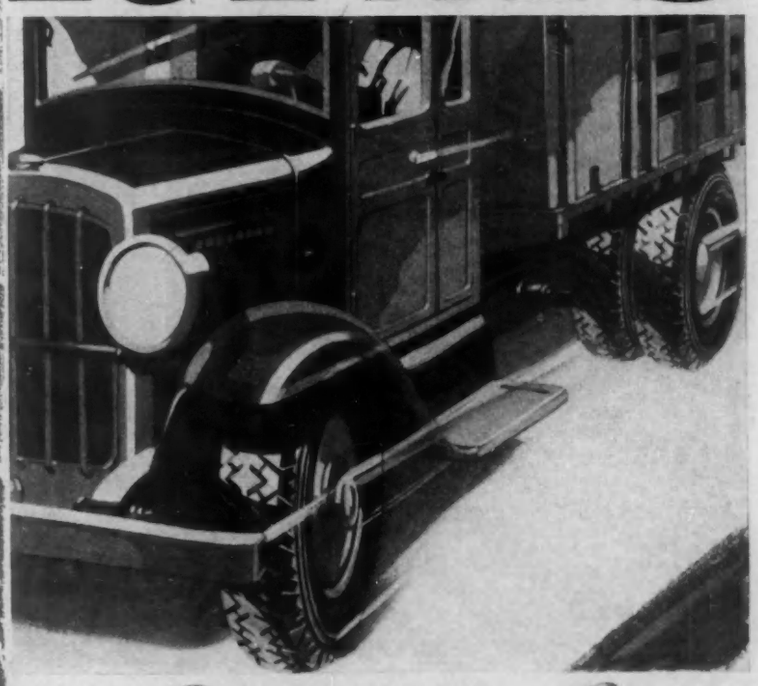
UNITED STATES ELECTRICAL TOOL CO.

CINCINNATI, OHIO, 2455 W. Sixth St., *and Branches in* — Atlanta — Boston — Chicago — Cleveland — Dallas — Denver — Detroit — London — Los Angeles — Minneapolis — New York — Philadelphia — Pittsburgh — St. Louis — Seattle — San Francisco — Syracuse — Toronto — Winnipeg

EXPORT REPRESENTATIVES: Westinghouse International Co., 150 Broadway, New York

Firestone "BO" RIMS

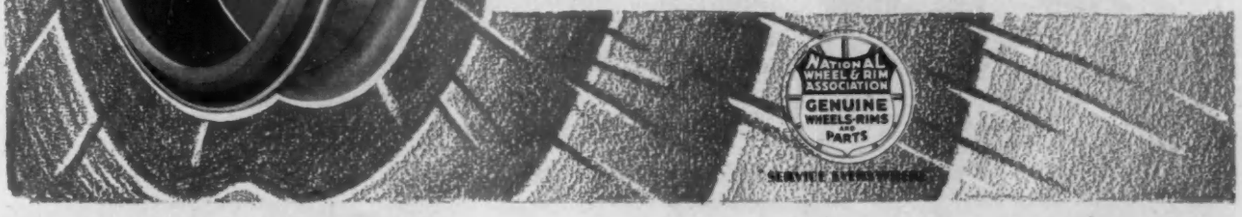




Cross section "BO" Rim showing solid continuous base reinforced by continuous side rings. The Visable Firestone Double Angle Locking Ring securely holds the tire.

Firestone Type "BO" Rims are especially adaptable for dual mounting on cast wheels. They assure positive alignment, ease of mounting, interchange ability and maximum seating surface. Removable side rings facilitate tire changes and retain the true contour of the tire beads. Also adaptable for disc and steel spoke wheels. Specify Firestone Rims for all types of wheels—Wood, Wire, Disc.

THE FIRESTONE STEEL PRODUCTS CO.
FIRESTONE PARK, AKRON, OHIO



Copyright 1930—The Firestone Steel Products Co.

Won't grab

Won't heat

Positive action

Positive release

2 minutes to adjust

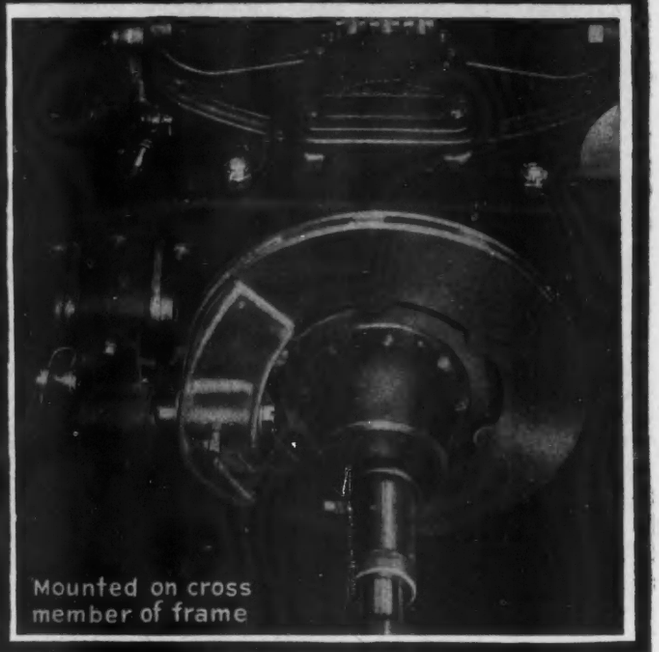
20 minutes to reline

Interchangeable parts

Special or standard equipment on practically all trucks and busses

TRU-STOP BRAKE

FOR EMERGENCY as well as for parking



Absolutely dependable!

Tru-Stop Brakes are absolutely dependable and a real safety measure—they are more than a parking brake.

"Squeeze-action" on both sides of a ventilated disc—the whole mechanism floating on one suspension point—these are the superior features of Tru-Stop Brakes which make them so positive and so smooth in action.

. . . These are the features which make this brake so easy to adjust, and so easy to re-line.

Economical

Linings last a long time because Tru-Stop *ventilated* brake disc keeps them cool. Adjustment for natural lining wear requires but a few minutes. A complete re-lining job takes only half an hour. (Less than 20 minutes if you keep re-lined spare shoes on hand.)

Insist on Tru-Stop Emergency Brake equipment for your new trucks and busses. Standard make transmissions have provisions for mounting Tru-Stop Brakes.

ACCO
AN ASSOCIATE COMPANY OF AMERICAN CHAIN COMPANY, Inc.
in business for Your Safety

AMERICAN CABLE COMPANY, *Inc., Automotive Division*

Bridgeport
Connecticut

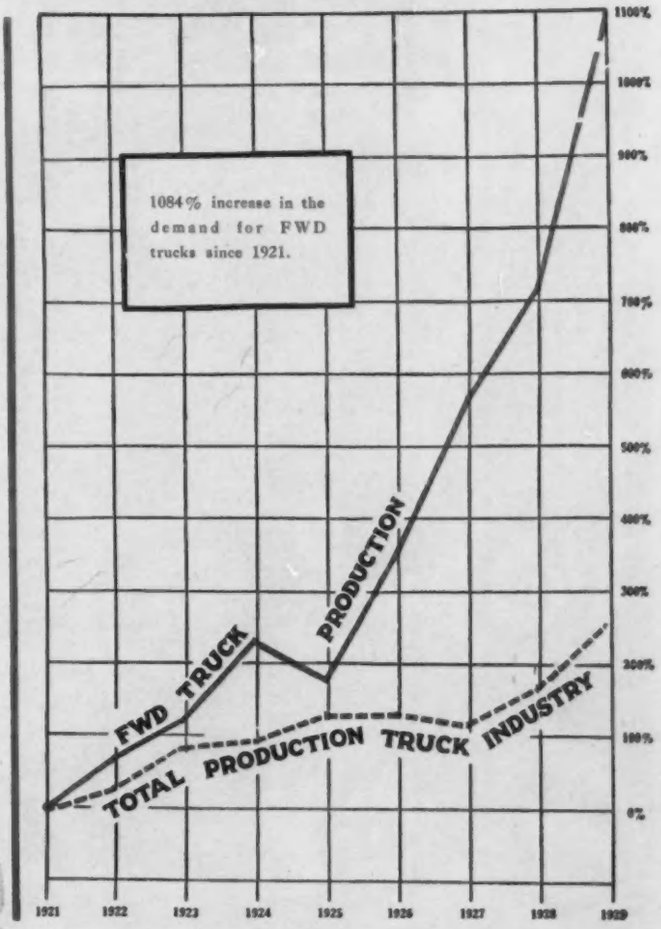
3-111 General Motors Bldg.
Detroit, Michigan

1084% INCREASE

Since 1921 the demand for FWD trucks increased 1084% while the total production for the truck industry increased only 250%.

In 1929 alone, the demand for FWD's was nearly 50% more than in 1928.

This record is unapproached by any other truck company!



It is easier to sell FWD's than to sell against them. Many highway departments, public utilities, oil producers and other careful truck buyers will have nothing else. The four-wheel drive has come into its own and the FWD is the leader of them all.

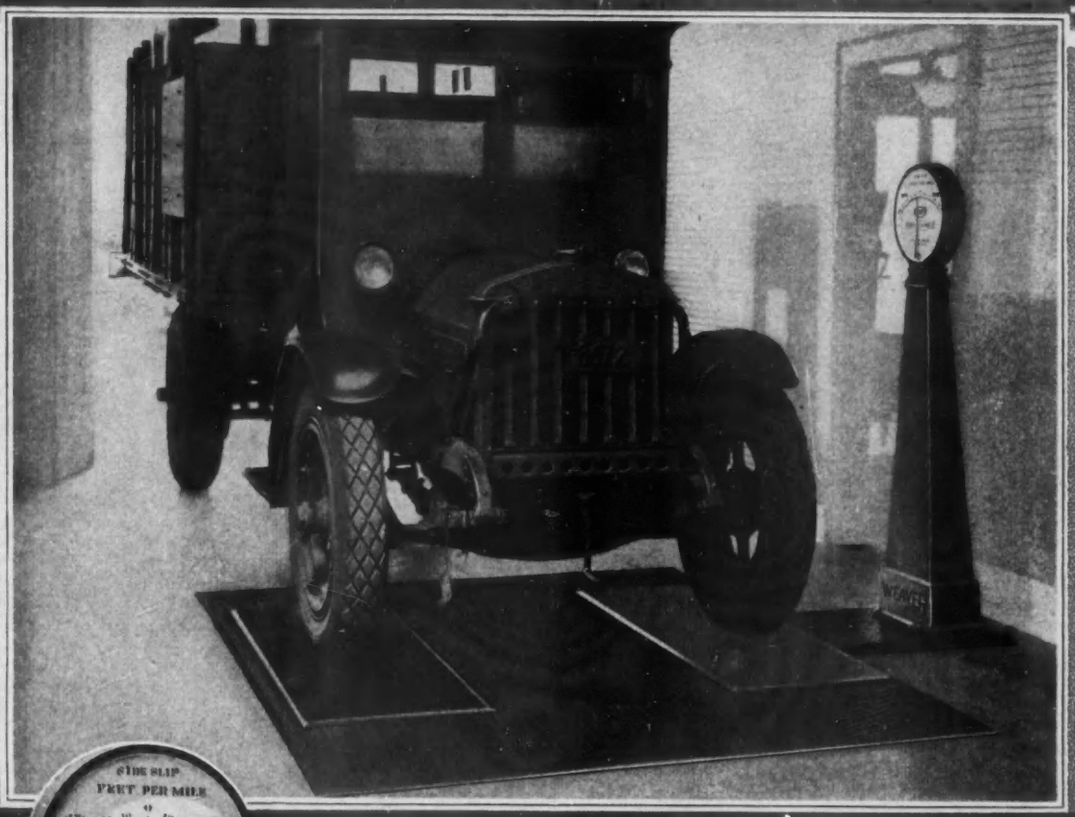
You or some other dealer is going to cash in on this growing market for FWD trucks. Write today for information.

THE FOUR WHEEL DRIVE AUTO COMPANY
CLINTONVILLE, WISCONSIN
CANADIAN FACTORY: KITCHENER, ONTARIO

BACKED BY NATION **FWD** **WIDE SERVICE**

TRUCKS

The New WEAVER Automatic Wheel Alignment Indicator



Indicates Side Drag

To determine the degree of road friction the car is simply driven over the Indicator. The big hand on the large dial directly in the driver's line of vision, instantly indicates the number of feet side slip per mile due to the wheels being in or out. After the front wheels leave the Indicator plates, plates and hand automatically return to zero, ready to test rear wheels or the next car.

Cut Maintenance Costs

Do you think in terms of reducing the cost of keeping your fleet on the road?

You can effect a real saving in tires, gas and oil—and minimize danger due to steering troubles by using a Weaver Automatic Wheel Alignment Indicator.

Easily installed. It lies flat. Can be placed in the runway or some other convenient place in the shop. Let your drivers make their own tests by driving over Tester every day. When the bell rings, it's time to make corrections.

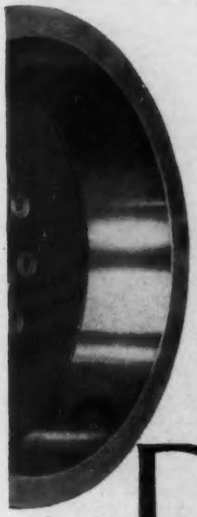
Ask your Jobber Salesman or write us for details.

WEAVER MANUFACTURING COMPANY

Springfield, Illinois, U. S. A.

WEAVER CANADIAN COMPANY, LTD., *Chatham, Ontario*

Weaver Shop Equipment for every need—Washing...Lubrication...Towing...Tire Repairs...Brake Relining...Jacks...Presses...Hoists...Axle Stands



NEVER BEFORE WAS THERE A DRUM LIKE *THIS!*

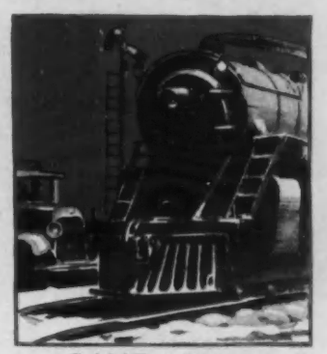
SAVE SCORING

SAVE DRUMS

SAVE LININGS

SAVE ADJUSTMENTS

SAVE TIRES



SAVE LIVES

GUNITE Drums do what no other drum has ever done before. They stay smooth as satin under the most gruelling punishment your bus or truck can give them—and that's plenty in modern city traffic.

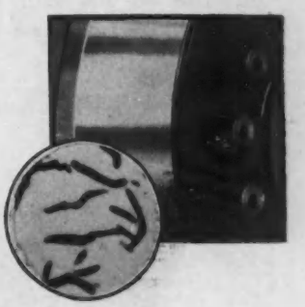
Gunite Drums are made of Gunite, a new metal which has tiny, fat flakes of graphite scattered throughout its structure by special process. These serve as a natural lubricant to prevent "stickiness" under friction. That is why Gunite Drums stay smooth, never lose their concentricity, and last far longer than ordinary cast or pressed drums.

You get three to five times more service from linings when you use Gunite Drums. Brakes require far less attention, fewer adjustments to keep them safe. And they make stopping *smooth*—an important feature in lengthening the life of tires.

Follow a regular plan of replacing worn drums with Gunite Drums. They're made for every bus or truck you now operate—can be had on new additions to your fleet by merely saying "Gunite Drums" in your buying specifications.

THE GUNITE CORPORATION
Rockford, Ill.

This section of a Gunite Brake Drum has seen many miles of service. The microphotograph in the circle is Gunite magnified 100 times to show the fat, even flakes of graphite scattered throughout its structure. This frees Gunite from the "stickiness" of ordinary steel under friction, keeps it smooth as satin.



GUNITE BRAKE DRUMS

GUNITE

(A-151)

White Trucks and Busses are easy to buy. Through the White Motor Securities Corporation you can arrange convenient terms and own a White while it is paying for itself in earnings.
A.N.Y. RY. TRANSPORTATION COMPANY
A.N.Y.RY. TRANSPORTATION COMPANY
A.N.Y.RY. TRANSPORTATION COMPANY
9
23-412

New Heavy Duty WHITE Six

carries greater pay loads on faster schedules

In many fields of operation there is the urgent need of hauling extremely heavy loads over long-distance runs on faster schedules.

To meet this demand White has designed and built the new six-cylinder Model 59-A. It is a splendid example of what White specialization means in solving the difficult problems of highway transportation.

The new White heavy duty truck and tractor model is designed as a complete unit to transport peak loads at the sustained high speeds demanded by modern highway traffic. It is built to fit the individual needs of the operator who has an unusual hauling job requiring greater capacity and more power for higher average speeds.

Model 59-A is available in a variety of wheelbases as a regular four or six-wheel truck or tractor. Mechanical or Westinghouse airbrakes can be furnished. Positive control is assured for the safe handling of heavy loads under modern highway conditions.

It is especially suited for trailer operation and for relatively high-speed operation as a heavy duty truck. For special operations requiring greatly increased power or speed, a larger engine is available.

THE WHITE COMPANY, CLEVELAND

WHITE

A COMPLETE LINE OF FOUR AND SIX CYLINDER

TRUCKS
BUSSES

Goodyear Balloons *for* Trucks

now end the toll of speed and distance

Everything that the larger, softer tire brought to the passenger car, this newest Goodyear Balloon brings to trucks—and more.

Greater cushion it gives in generous measure. It holds the road with a greater grip; pulls through soft going; enables your trucks to put more miles behind them in an hour, a day or a season.

But even more than all this the new Goodyear Truck Balloons are *cool running* at maintained high speeds. The internal heat which broke down former tires of higher pressure does not develop in these Goodyear Truck and Bus Balloons.

If your tire bills have been mounting, try these new Goodyears. See the costs come down. Consult your nearby Goodyear Truck Tire Service Station Dealer about a change-over on your present trucks. On your new trucks, specify Goodyears—leading truck manufacturers now offer them as optional equipment.

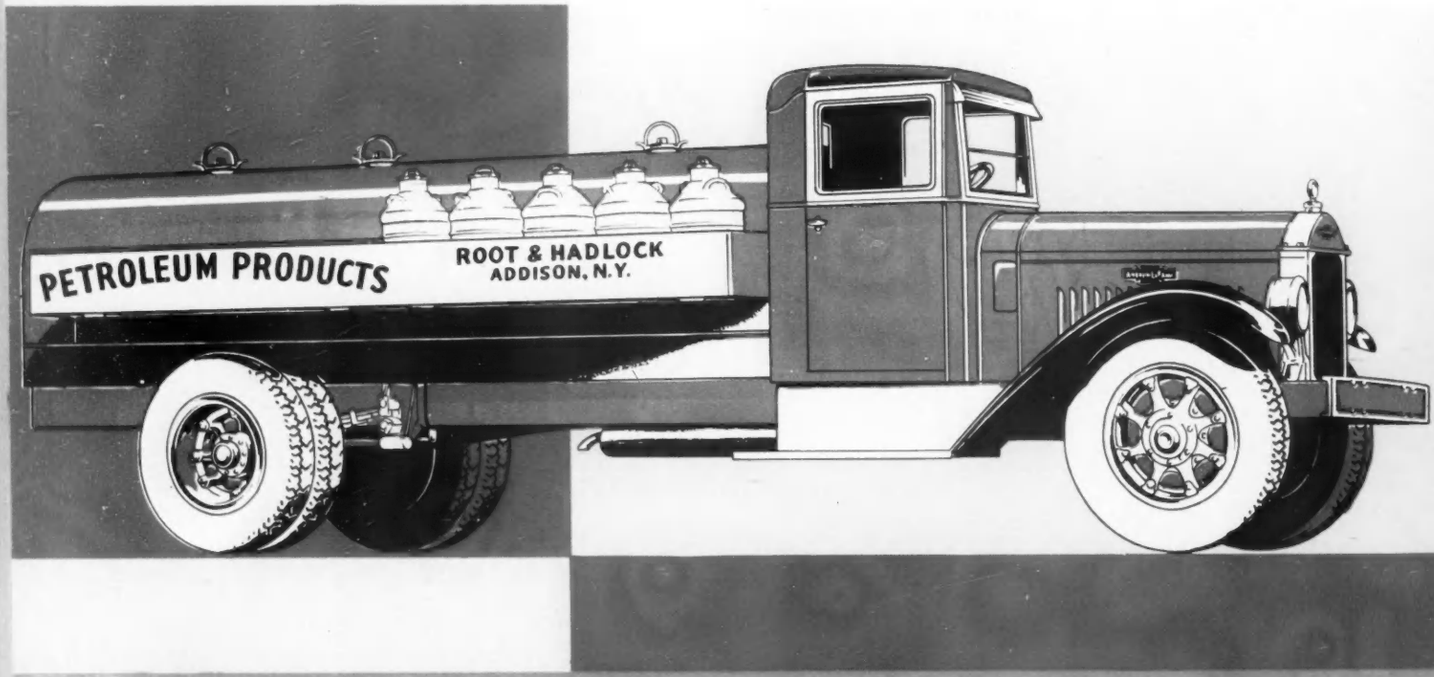
GOODYEAR

MORE TONS ARE HAULED ON GOODYEAR TIRES THAN ON ANY OTHER KIND

LA FRANCE
REPUBLIC

A complete NEW line of TRUCKS

—*backed by men with whom success is a habit*



LA FRANCE-
CORPORATION

AMERICAN-LaFRANCE CHIEF. 2-2½ tons capacity, 6-cylinder truck engine. Massive 4-speed truck type transmission mounted amidships. Full-floating rear axle with roller bearings in rear wheels. Mechanical brakes on 4 wheels. Heavy, generously braced frame of heat-treated pressed steel. Large springs, with auxiliaries. Dual pneumatic rear tires.

LA FRANCE REPUBLIC

THE men who create a product are the best index to the values offered in exchange for your dollars. That product is a reflection of their past experience, knowledge of present requirements and vision of the future. On that or any other basis, LaFrance-Republic invites closest scrutiny. Comparisons are welcomed. ¶ The line is complete. It is new. It is modern. It is born of success. These models offer more power, more strength, more speed, quicker action, greater economy. And as for styling, LaFrance-Republic models are worthy representatives of successful businesses. ¶ Whether you operate motor trucks or sell them, you will do well to investigate the facts on which these statements are founded. If you are a truck owner, write for information on this new line. If you are interested in a new business opportunity, write for information on the LaFrance-Republic dealer plan.

THE NEW, COMPLETE LaFRANCE-REPUBLIC LINE

Model A-1. 6,000 lbs. Straight Rating Capacity	Model L-1. 18,000 lbs. Straight Rating Capacity
Model C-1. 7,000 lbs. Straight Rating Capacity	Model M-1. 20,000 lbs. Straight Rating Capacity
Model D-1. 9,000 lbs. Straight Rating Capacity	The "Chief" . . . . . 2-2½ tons Capacity
Model F-2. 12,000 lbs. Straight Rating Capacity	The "Chieftain" . . . 3-4 tons Capacity
Model H-1. 15,000 lbs. Straight Rating Capacity	The "Big Chief" . . . 5-7½ tons Capacity

REPUBLIC

ALMA ▲▲▲ MICH.

LaFRANCE-REPUBLIC F-2. 12,000 pounds straight rating capacity. Heavy duty, 6-cylinder, truck engine. Overstrong, selective type 4-speed transmission. Full floating rear axle of finest alloy steel. Husky radius rods. 4-wheel, internal expanding brakes. Deep, extra heavy frame with long, wide, semi-elliptic springs, of a new, modern design, reducing frame stresses, and allowing springs to function with greater efficiency. 32x6 heavy duty cord tires, dual rears.

DUMP TRUCK PROFITS

This operator is interested in profits. He realized that time is the vital element in any job. He increased his capacity by selecting hoists and dump bodies designed to meet his specific requirements. ¶ He brought his hauling and dumping wants to Wood. He found in the Wood line hoists and bodies that assured him dump truck profits. ¶ He found that our 19 years of practical experience in building hoists and bodies for dump truck men, for every make and capacity of motor truck, was of real value. ¶ He knows now that any chassis equipped with a Wood Hoist and Wood All-Steel Dump Body is a more efficient dumping unit.

Write for Catalog 10

WOOD HYDRAULIC HOIST & BODY CO., DETROIT, MICH.

SERVICE EVERYWHERE

BRANCHES AND DISTRIBUTORS IN PRINCIPAL CITIES

WOOD HOISTS & BODIES

Traveling an annual mileage equal to TWICE around the world

HEAT-SHAPING

helps make possible this

Pedrick performance

The average common carrier bus travels annually about 50,000 miles. This is approximately equal to twice around the world.

The ever increasing demand for greater distance—greater speed—greater loads—brings an ever increasing demand for greater efficiency in operation and lower cost for upkeep.

Wise Service Managers are using PEDRICK Heat-Shaped Oil-Control and Compression Rings for replacement, for they know that they wear longer and perform with much greater efficiency.

Heat-Shaping by a special patented process assures a ring that is round and stays round.

Complete stocks available everywhere.

Wilkening Manufacturing Co.
Philadelphia

Any Dealer Can Verify This-

ANY dealer can tell you that many truck operators have their own ideas as to what they want in the way of chassis and body. That means that the dealer who is forced to stick too close to factory specifications is handicapped. To make a sale he must ride roughshod over the customer and force a standard job on him, or he takes his standard job and tries to adapt it—perhaps to work for which it was never intended.

To these dealers we want to say first that Selden-Hahn makes good standard trucks that you can sell in any market. Second—we are close enough to our production to give you almost the equivalent of a custom built job at production prices. Specification changes can easily be made on units going through the shop, and chassis and body are so balanced that your customer secures the maximum performance from his completed unit. Thirdly—we give you a chance to make money on your franchise. We have a good proposition for you. Write.

MODEL 47 B
3½ TON

Engine: 6-cylinder Continental 4" bore by 4½" stroke. 7-bearing crankshaft. Silent chain front end drive with automatic take-up.

Brakes: 4-wheel hydraulic through vacuum booster.

Steering: Ross cam and lever steering gear.

Clutch: Multiple disc. Dry plate.

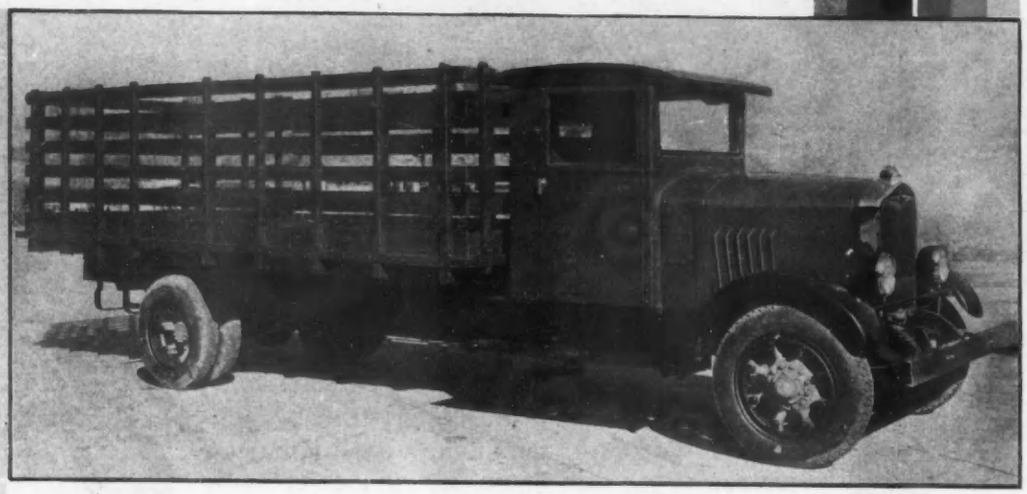
Frame: Pressed steel 7" x 3½" x ¼" reinforced with heavy steel plates.

Four-speed transmission.

12, 14 and 16 ft. loading spaces.

Helper springs.

Full-floating heavy-duty bevel axle.



Selden-Hahn Motor Truck Corporation
ALLENTOWN, PENNA.

Selden — IN-BUILT QUALITY — Selden — MOTOR TRUCKS — **Hahn**

Dayton Truck Tires *are specially built for specific duties*

DAYTON truck and bus tires for 1930 are *more* than just big heavy brutes of tires. They've always been big enough and sturdy enough to give long trouble-free service.

But the 1930 Daytons are by far the greatest tires *even Dayton* has ever built . . . and for these reasons:

No manufacturer ever gave more thought to the building of a line of bus and truck tires that would meet every requirement of truck and bus operators. As a result these tires are practically custom-built. Bead and bead reinforcements are designed to give exactly the proper load distribution over the tire and to prevent bulging at the rim. The Dayton carcass is unbelievably tough; even after the tire has served its purpose the Dayton carcass is still live and snappy—and the *new* Dayton Dispersion Process for treads gives perfect and uniform distribution of *all* tread ingredients.

These are only a few of Dayton's unique and exclusive construction features. It will pay you to find out about all of them.

Your Dayton dealer has the right technical information necessary to fit the tire to your job and to your truck or bus—he has detailed illustrated information showing how Daytons are built. See him—let him show you why Daytons give such extraordinary service—why Daytons will give you those extra trouble-free miles that mean greater earnings and more profit for you.

Put Daytons on the wheels of your trucks and buses today.

✣ ✣ ✣

1. Double Oversize
2. Double Bead
3. Double Reinforcement above Bead
4. Double Cord Breaker
5. Double Cushion
6. Cushions between Plies
7. Machine placed tires
8. Heavier Sidewalls
9. More rubber in tread
10. Greater Air Volume
11. Larger Standing Diameter
12. Dayton Special Dispersion Process

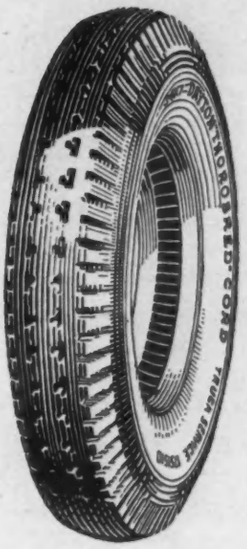
THE DAYTON RUBBER MFG. COMPANY
Dayton, Ohio

Dayton

Heavy Duty and Special Service
Truck and Bus Tires

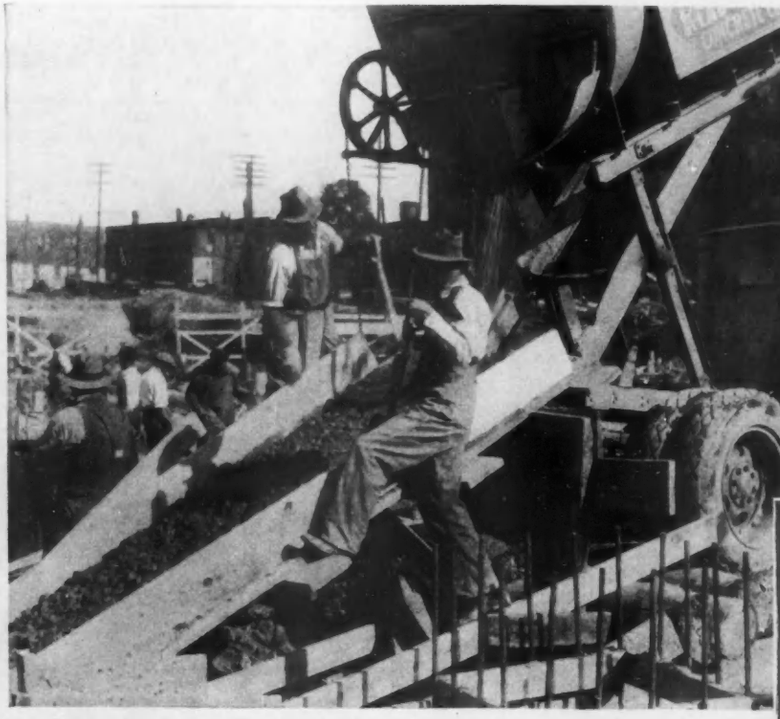
Two of the 1930 Dayton Line

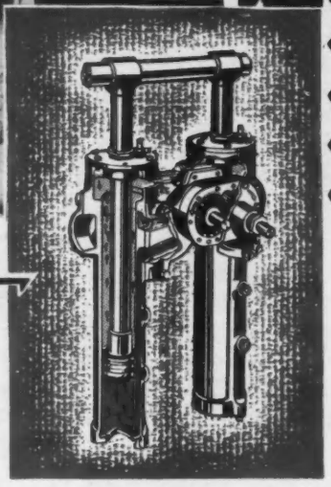
Dayton Heavy Duty Truck and Bus Balloon Tire



Dayton Special Service Truck and Bus Tire

O-44





HEIL Hi-Lift Hoist

Conveniently located, manually controlled slide bar arrangement allows a straight rear dump.

Heil Hydraulic Hoist and Heil "Round Head" wet mix body for short haul concrete service.

THE Heil Hi-Lift unit comprises the powerful twin cylinder Heil hydraulic hoist operated by a power takeoff from the truck transmission and the Heil Hi-Lift linkage. The Heil Hi-Lifter has already proved its efficiency for use with coal bodies, concrete mixer bodies, ice bodies. It is adaptable for any hauling requirement necessitating the elevation of the body.

An outstanding feature of the Heil Hi-Lifter—as the linkage raises, the body moves forward so that at full raised position it is approximately 8 inches forward of its normal riding position. This keeps the center of gravity of the load constant and prevents back tipping of the truck.

The Heil Hi-Lift unit at full height permits a 30° to 40° dumping angle and a 7′ to 7′6″ tailgate ground clearance. Used as a regular dump the body tipping angle is 55°.

Heil Hi-Lifters require a 19″ mounting when used with a concrete body and a 22″ mounting when used with a coal body. This difference in mounting height is accounted for by the telescopic chute, which is included with the Heil coal body, and nests under the body out of the way, yet handy for service.

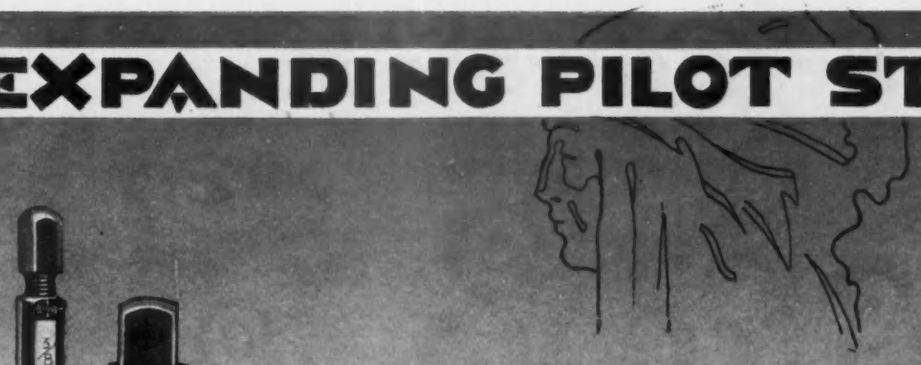
Heil dump truck equipment includes a series of hoists and bodies for every kind of dumping service. Write for bulletin 160, also request a copy of the new Heil dump body catalog.

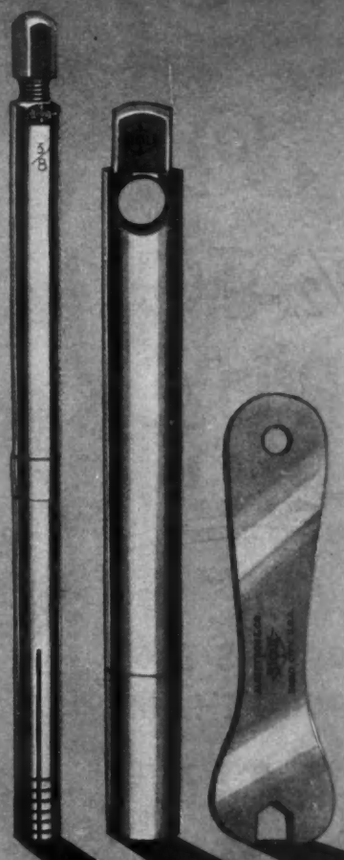
HEIL Quality

THE HEIL CO.

1401 MONTANA AVE. MILWAUKEE, WISC.
BRANCH OFFICES: NEW YORK BOSTON PHILADELPHIA DETROIT CHICAGO
DISTRIBUTORS IN ALL KEY CITIES

EXPANDING PILOT STEMS





Greater Accuracy and Speed on Valve Work!

WITH precision, the Sioux Expanding Pilot Stem holds the reamer perfectly centered over the valve seat, even though the guide hole be worn and uneven. The pilot, when expanded in the guide hole, is rigidly anchored in place and does not rotate. A separate shank carries the reamer, fits snugly over the top half of the pilot and rotates thereon. Thus the reamer cannot travel in the path of the worn valve seat. SIOUX REAMERS, made of special alloy steel, specially treated, cut smoothly, work easily and stand up in long service.

A Big Saving in Reamer Equipment is made possible by *Sioux Universal Type Reamers*, each of which can be used on valve seats of several different sizes, and Sioux Expanding Pilot Stems, eight sizes of which handle most standard makes of cars in all required oversizes and undersizes.

Your Jobber Sells Them.

ALBERTSON & CO. INC., Sioux City, Iowa, U. S. A.

No. 82. Valve Seat Reamer Set. Complete, Net $69.00

SIOUX
Trade Mark Reg U.S. Patent Office

STANDARD THE WORLD OVER

VALVE SEAT REAMERS

Increase your transport efficiency and cut your costs with the

WILLYS SIX

1½-TON TRUCK

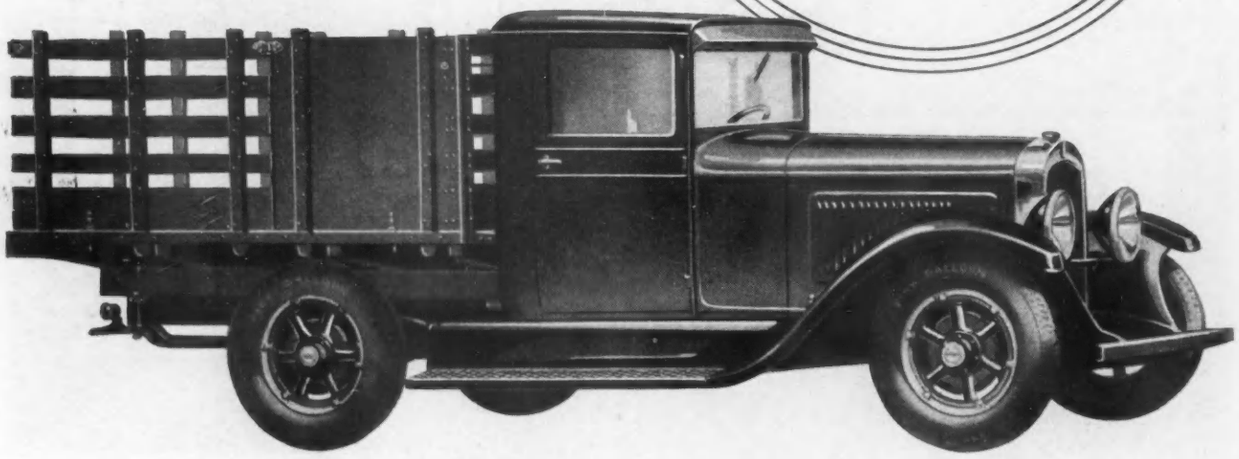
● ● ●

● Speed, reliability, safety, economy, long life—all are necessary for successful truck operation. The Willys Six 1½-Ton Truck, a thoroughly up-to-date unit in every particular, has been designed by skilled engineers to meet the urgent demands of present-day commercial transportation. The Willys Six Truck has a notably sturdy chassis and a fast, powerful high-compression engine with four-speed transmission. An inspection and a demonstration will prove interesting and profitable. See your nearest Willys-Overland dealer.

WILLYS SIX
1½-TON CHASSIS

$695

Whippet Light Delivery Commercial Chassis, $360.
All Willys-Overland prices f. o. b. Toledo, Ohio, and specifications subject to change without notice.



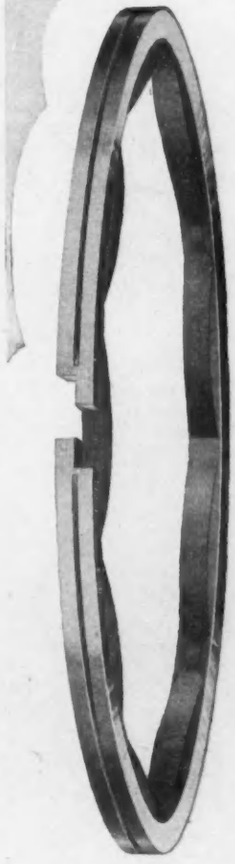
WILLYS-OVERLAND, INC., TOLEDO, OHIO
WILLYS-OVERLAND SALES CO., LTD., TORONTO, CANADA

Keep That Youthful Performance with

STA-TITE

PATENT PENDING

TRADE MARK REGISTERED



QUALITY Brand leadership has always been maintained, not through high pressure merchandising, but through meeting and solving real piston ring problems.

The new Quality Sta-Tite ring with its properly applied inner spring pressure takes a mighty step forward in making this type of ring replacement all it can and should be.

Sta-Tite Performance Will Appeal to Every Good Mechanic.

The Piston Ring Company

Muskegon, Michigan

HOW MUCH IS $10.00?

$10 is 100 ten-cent bus rides, and riders hate road-side delays. $10 is four to five hours of pay-load truck time. It is the cost of keeping expensive rolling stock parked on the edge of a highway at midnight waiting for a man to come scooting in a service car to replace a suddenly-dead battery.

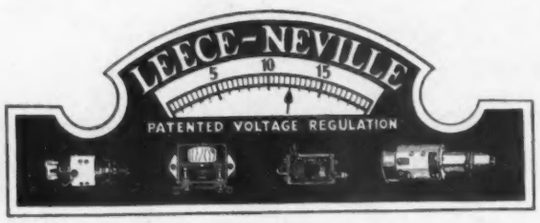
$10 is the daily profit Murphy used to make from old man McGinnis until McGinnis tired of getting alibis instead of clock-like schedules — and transferred his business to a fleet-owner who uses Leece-Neville Voltage Regulation.

Leece-Neville Voltage Regulation pays for itself by stopping ten-dollar leaks due to starting and lighting troubles. You really ought to find out all about it!

VOLTAGE REGULATION MINIMIZES ELECTRIC MAINTENANCE

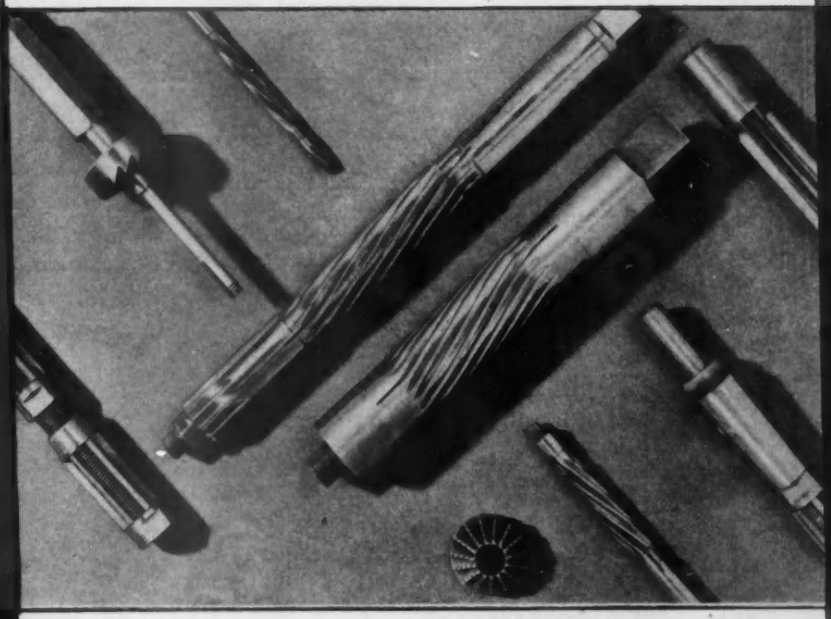
1. Battery cannot be overcharged.
2. The battery is charged only at the correct rate for its state of charge.
3. Battery will operate longer without requiring replenishing of electrolyte.
4. Life of battery greatly prolonged.
5. Lights can be operated direct from generator.
6. Loose connections will not cause lamp bulbs to burn out.
7. Makes most economical generator system.
8. Any Leece-Neville Voltage Regulated Generator can be used without battery.
9. Lamp life greatly prolonged.
10. Motor coaches fitted with Leece-Neville voltage regulated generators provide passengers with satisfactory illumination and safe transportation.

LEECE-NEVILLE CO.
CLEVELAND, OHIO



OFFICIAL
BRUBAKER
CUTTING TOOL
RECONDITIONING
SERVICE

A SERVICE THAT SAVES YOUR CUTTING TOOLS



Here is a real opportunity to save money!

A better method for the use and care of cutting tools . . . *the Brubaker cutting tool reconditioning service.* Established by Brubaker—a name that is twice as old as the automotive industry itself—an organization which has solved many a cutting tool problem—fully equipped to manufacture all the cutting tools for the truck maintenance work.

This cutting tool reconditioning service is sold by the Brubaker jobber. Reconditioning adds many months extra service to the cutting tools you have in your shop today. The service is rendered by a cutting tool expert, who knows how resharpening is done without endangering the life of the tool.

Brubaker jobbers can help you to lower the cost and upkeep of your tool equipment. Get in touch with the official Brubaker cutting tool reconditioning service in your locality.

W. L. BRUBAKER & BROS. CO.

MILLERSBURG **PENNA.**

BRUBAKER

POWERFUL *and* FAST—*Built to Last*

GRAMM

Why Are Dealers Flocking to Gramm?

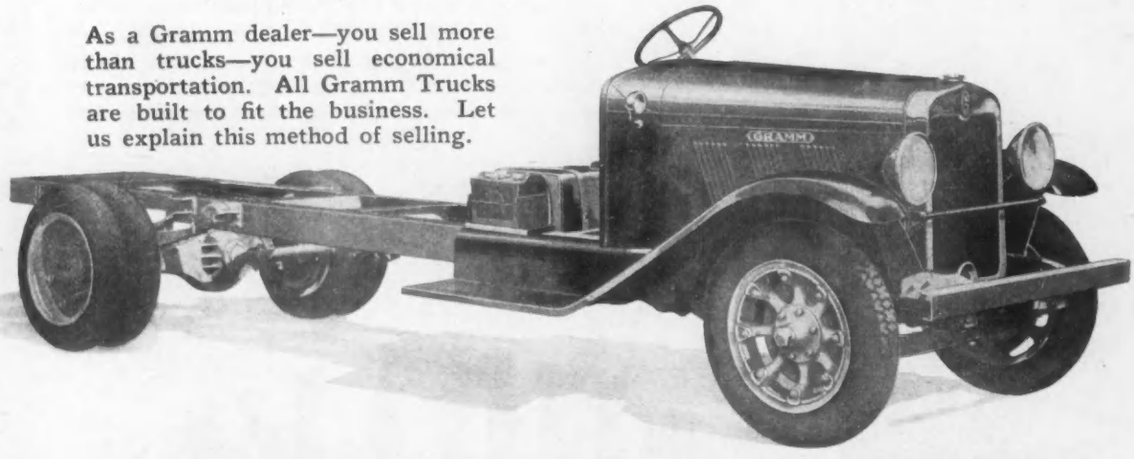
THE reason is obvious if you but compare the specifications and prices of Gramm Trucks with all others in their class. Outstanding Value!

In the past few weeks, the number of dealers turning to Gramm has been astounding — these dealers realized the possibilities in their territories for trucks of Gramm character — at these low prices.

The long dealer discounts and factory sales co-operation are other factors too—that you should know about.

Write for a complete dealer plan—it will mean profit for you.

As a Gramm dealer—you sell more than trucks—you sell economical transportation. All Gramm Trucks are built to fit the business. Let us explain this method of selling.



Executive Offices and Factory: Delphos, Ohio

GRAMM MOTORS, Inc.

Builders of fine Motor Trucks, Vans and Coaches

Truck Capacities 1½ to 5 Ton

CLECO

A SYMBOL OF QUALITY

"CLECO", the trade-mark on all Cleveland Pneumatic Tool Company products, stands for the most exacting workmanship; the finest of materials; and a high degree of pride in turning out products that will carry on a tradition of over 20 years of uncompromising quality.

No part of a motor vehicle is more precision-built than Cleco-Gruss Air Springs. No other type of shock absorber can duplicate the efficiency and economy of these soft powerful cushions of compressed air. This fact is reflected in the increasing number of prominent manufacturers who have adopted them as standard equipment.

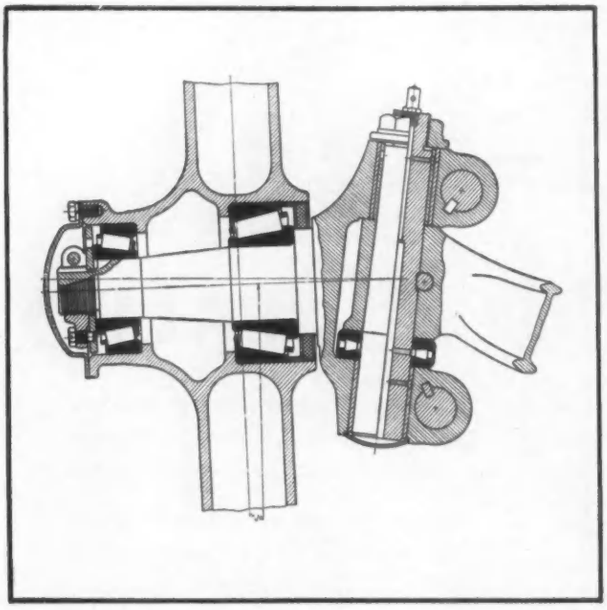
Below are the two name plates used to identify Cleco-Built Air Springs. They are your guarantee of quality and performance.

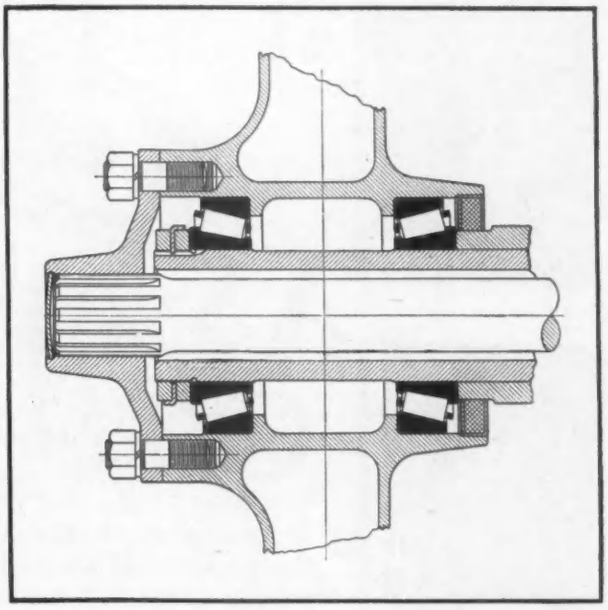
Cleco-Gruss Air Springs are manufactured by The Cleveland Pneumatic Tool Company, Cleveland, Ohio. Distributed and serviced the world over.

The Cleveland Pneumatic Tool Company also offers a complete line of fine air-operated hammers, chippers, drills and accessories.

CLECO AUTOMOTIVE PRODUCTS

MANUFACTURED BY THE CLEVELAND PNEUMATIC TOOL CO., CLEVELAND, OHIO





Maximum Wheel Capacity

TIMKEN BEARING EQUIPPED

Elimination of friction constitutes but a part of the function of bearings in truck wheels.

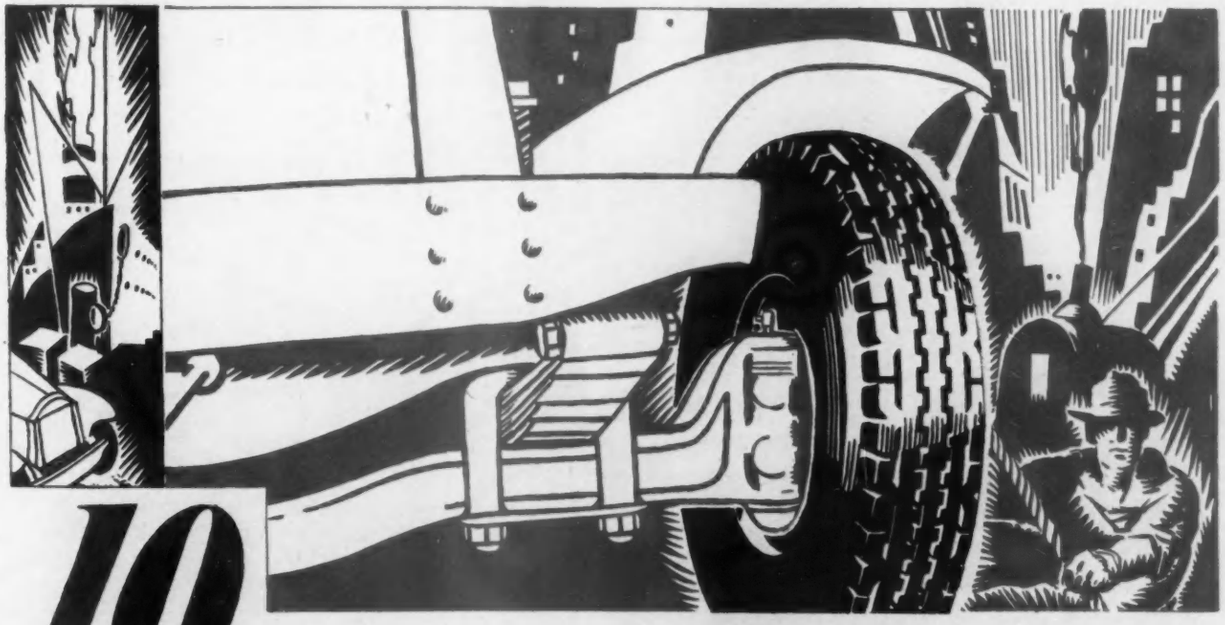
Of even greater importance is the capacity to carry, safely and surely, the heavy diversified loads which trucks *must* carry.

In front and rear wheels alike, it takes the exclusive combination of Timken tapered construction, Timken *POSITIVELY ALIGNED ROLLS* and Timken steel to completely overcome *thrust, radial and combined loads,* shock and torque, and thus insure the factor of safety under every condition of speed and road.

And Timken versatility likewise safeguards *efficiency* —not only in wheels, but in differential, pinion and steering.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**



10 reasons why Thousands have Changed-over to the Jumbo Truck-Balloon

1. Greater *cushioning* of truck and load.
2. Maximum *traction*—gets through when solids and high-pressures can't.
3. Greater *driver comfort.*
4. More *non-skid* contact—reduces slippage.
5. Capable of maintaining *higher average speeds* for faster operation.
6. Absorbs gradual fatiguing of *springs.*
7. Reduces *high crowned road abuse* on rear duals.
8. 90% of all high-pressure pneumatic tire troubles are *eliminated.*
9. Both *tire life* and *truck mileage* are materially increased—with *more profit* to you.
10. Engineered, built and recommended by General—for 13 years the *leader* in *truck tire development.*

❖ ❖

Never before has a tire offered operators such spectacular savings as these. And your General Tire dealer has the only *complete* line of Truck-Balloons . . . including 24-inch wheel sizes. Now you can change-over to Balloons without changing wheels!

Built in Akron, Ohio, by the General Tire and Rubber Company.

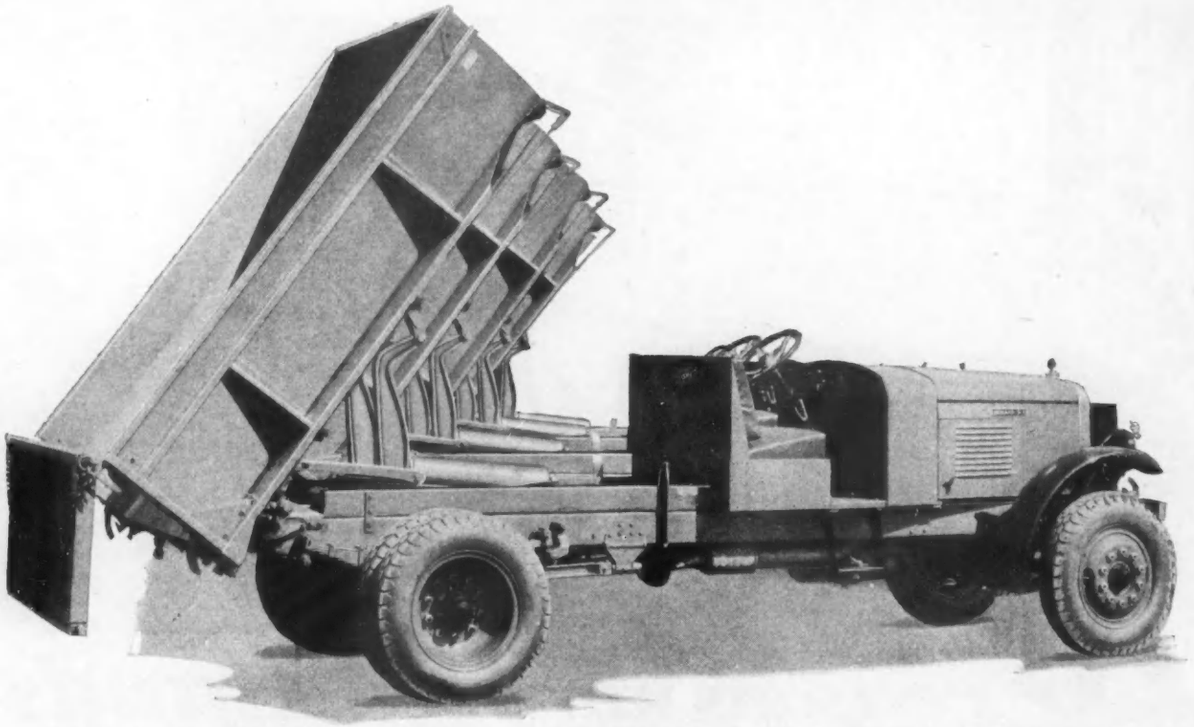
Consult with your truck manufacturer regarding General Jumbo Truck-Balloons on your next truck.

❖ ❖

General's complete line of cords, balloons and cushions includes: Jumbo Truck-Balloon; Bus Balloon; Dual-Grip truck cord; Dual Traction dump truck cord; the "Jumbo" Ford and Chevrolet line; Heavy Duty Non-Skid Cushion, high-speed and regular; Air Center Cushion, non-skid and rib-tread; High Smooth Cushion; Standard Cushion; Demountable Cushion; Tractor Cushion.

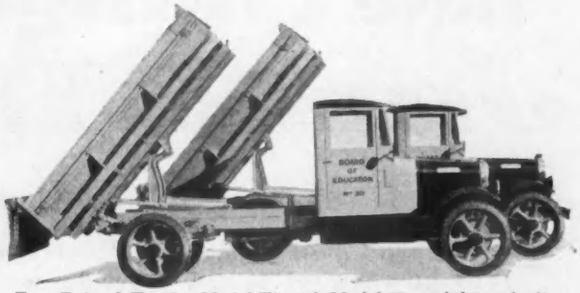
The GENERAL Jumbo Truck-Balloon

—goes a long way to make friends



A fleet of four Indiana Model 627-AU-156W/B chassis, equipped with Model 7UB St.Paul Underbody Hydraulic Hoists. Bodies are steel, 3 yard capacity, 5 feet, 6 inches wide by 9 feet long with 19½ inch sides and 26 inch front end and double-acting endgates.

What Goes Up Comes Down!



Two Federal Trucks, Model T8 with Model 12 steel dump bodies equipped with Model 7UB St.Paul Underbody Hydraulic Hoists.

If you have a new truck or an old truck, a heavy truck or a light truck—there is a St.Paul Hoist for it.

True—but with dump trucks heavily and unevenly loaded, first your hoist must get 'em up without body strain, frame distortion or piston bending and lots of other grief that causes expense and tieups. After they're up they'll come down,—but how? You can't let a heavy body crash down on your chassis. It must lower gently, hold firmly against lashing and whipping—cushioned against oil. All these conditions have been met by building into St.Paul Hoists over a period of years, the necessary features to handle every kind of dumping operation, on every kind of truck.

"Ask the Dump Truck Driver on the Job"

St.Paul

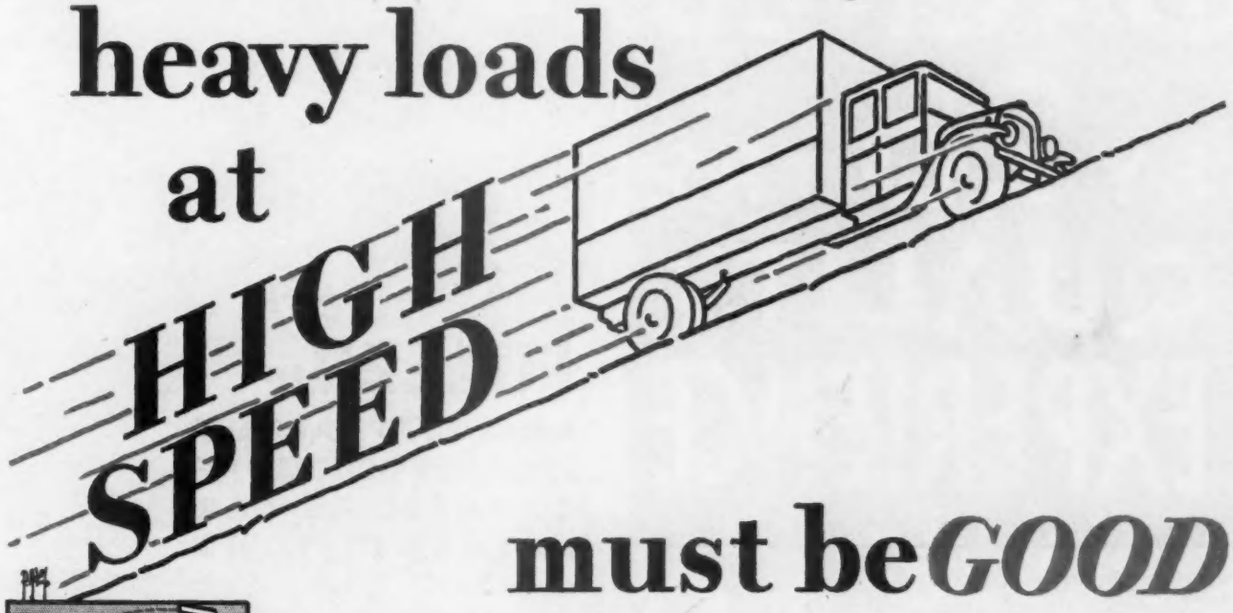
VERTICAL AND UNDERBODY HYDRAULIC HOISTS

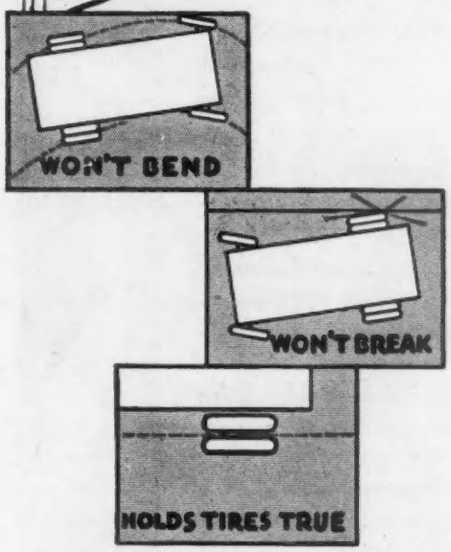
St.Paul Hydraulic Hoist Company

Factories at St. Paul, Minnesota

A St.Paul Hoist Distributor and Service Station is near you. Write for name and address.

Wheels that carry heavy loads at HIGH SPEED must be *GOOD*





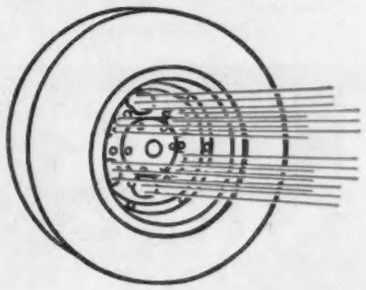
Strange as it may seem to the automotive engineer, wheels, to many truck owners, have been among the least considered parts of a job. Today, however, truck speeds of 35, 40, 45 and more miles per hour, with pneumatic tires, have brought the importance of the wheel home to every truck owner.

A speeding truck *must* have a *good* wheel. Wheels must run true *always*, without swaying. Wheels must not bend in spite of the shocks, terrific sidethrusts and accidental impacts of high speed service. Wheels for dual pneumatics must dissipate the brake drum heat that results in quick tire and brake lining failure.

Dayton Dual Pneumatic Steel Wheels run positively true and cool always. Strong air currents possible only with the Dayton design keep brake drums, brake linings and tires cool. Dayton Duals will not bend or weaken or lose their true alignment under the toughest kind of service. The first cost of a set of Daytons is the last and only cost.

You can changeover easily from solids to pneumatics with Dayton Duals. Send for booklet of valuable information on changeovers.

THE DAYTON STEEL FOUNDRY COMPANY
DAYTON, OHIO



RUNS COOL

Dayton Duals have been proved the coolest running wheels. Air is whipped against brake drum and is not wasted between tires. Tire beads are protected.

Dayton
The Mark of a Good Wheel

BACKED BY 28 YRS. QUALITY EXPERIENCE

FULLER—
AMERICA'S LARGEST EXCLUSIVE BUILDERS OF COMMERCIAL CAR TRANSMISSIONS

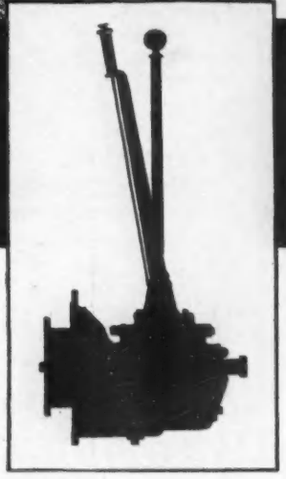
EVERY detail of a Fuller transmission is designed and calculated with utmost accuracy — backed by 28 years' experience in manufacturing commercial car transmissions.

This past experience enables Fuller engineers to forcast transmission performance with absolute certainty and safety. Our recommendations are based upon proven principles.

Be protected by the name FULLER on the transmission of the truck, bus or taxicab that you build, sell or operate. It is positive assurance of long-life performance — low cost operation—dependable service.

If you have a commercial vehicle transmission problem, the experience of 28 years' proved performance is available — FULLER engineers will gladly consult with you when either standard or special transmissions are being considered.

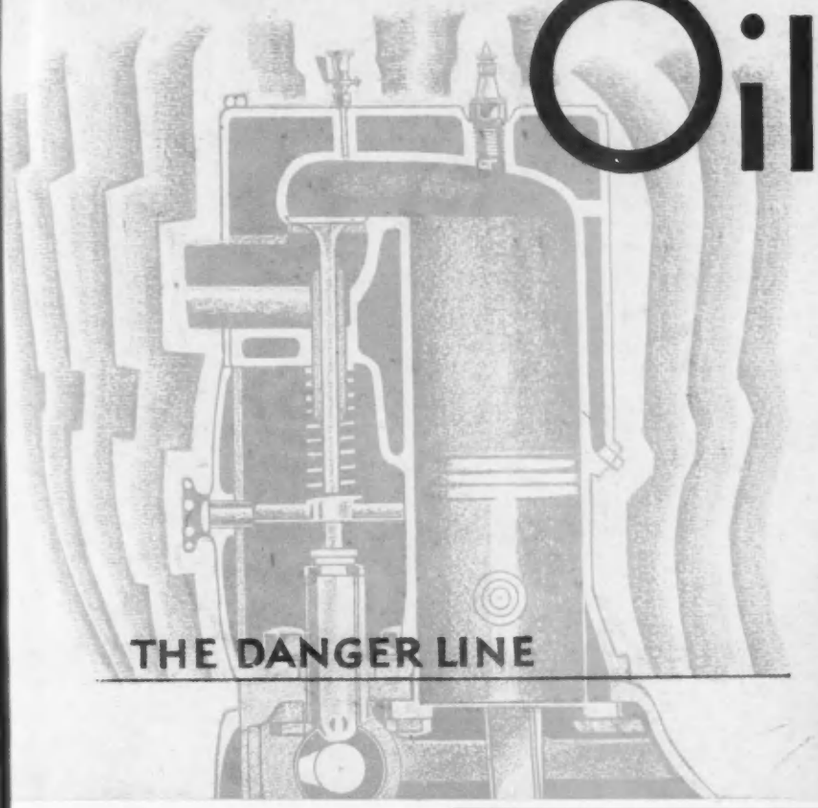
FULLER AND SONS MANUFACTURING CO.
Division Unit Corporation of America
BANKERS BUILDING MILWAUKEE, WISCONSIN



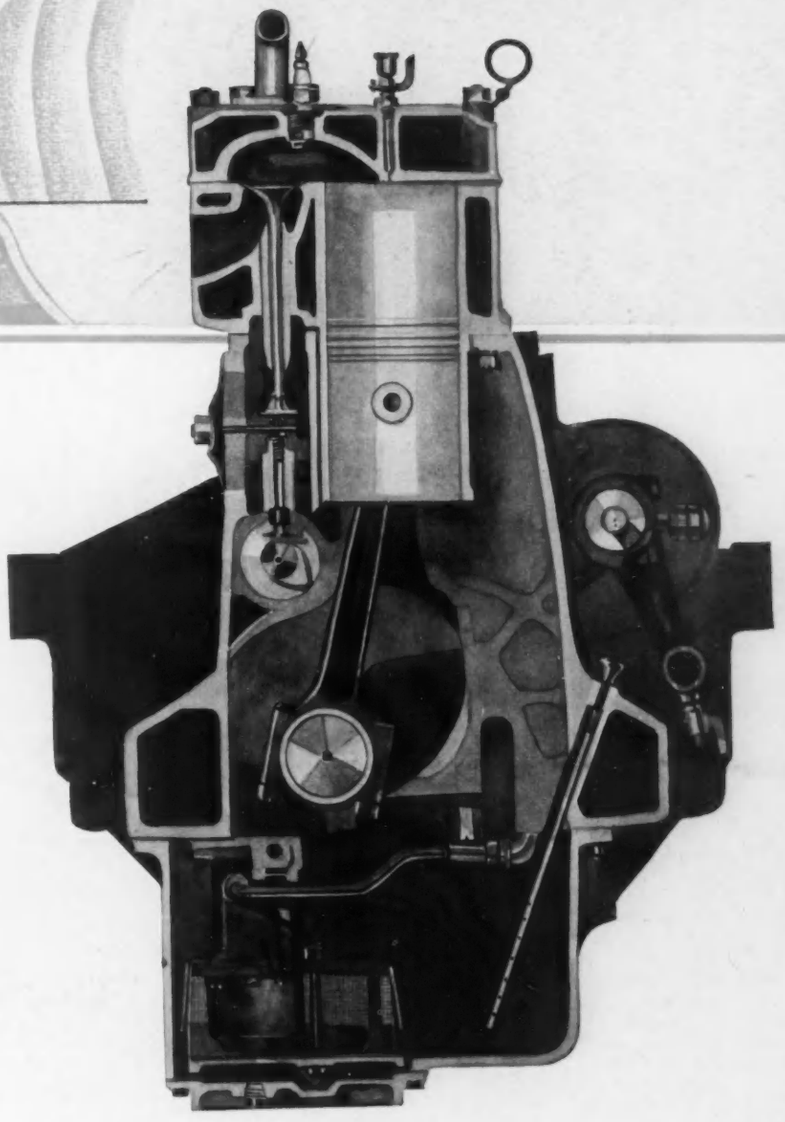
FULLER TRANSMISSIONS

Engineers Manual *"Low Cost Transmission Service"* mailed on request.

Oil joints that stay TIGHT



THE DANGER LINE



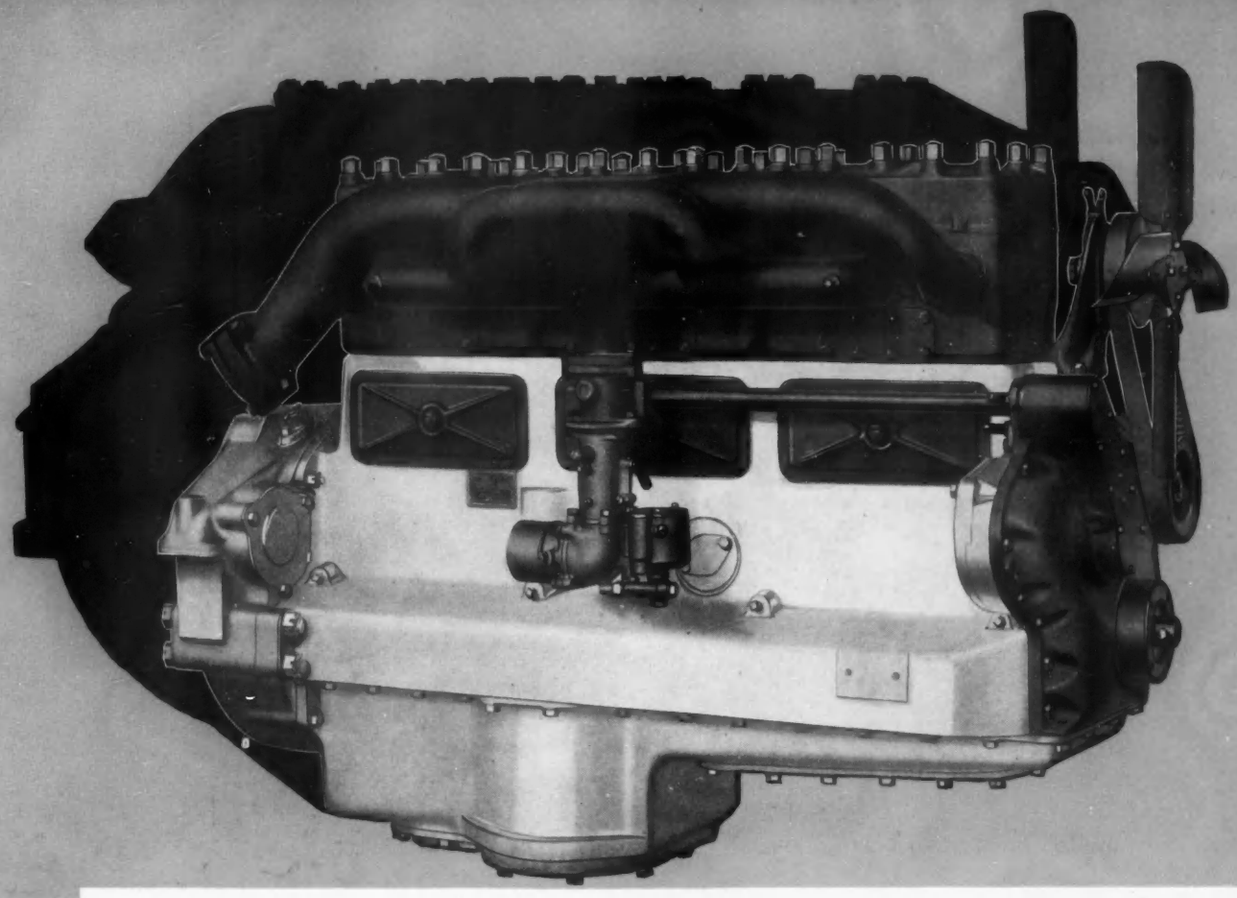
THE patented "girder" crankcase of a Waukesha engine is fully six or seven inches deeper than the garden variety. This makes "truncated" cylinders feasible. The outer crankcase wall extends half-way up the cylinder barrel . . . the cylinders are attached to the engine about mid-stroke, nearly opposite the point of greatest side thrust. Cylinder rocking is eliminated. Alignment is perfect . . . strains and deflection are reduced to a minimum. Joints that keep oil tight prove this.

Bulletin No. 691 describes in detail the truncated cylinders and other long-life construction features of Waukesha bus and truck engines.

Write to *Automotive Equipment Division, Waukesha Motor Company, Waukesha, Wis. Offices: New York, 8 W. 40th St.; San Francisco, 7 Front St.*

WAUKESHA ENGINES

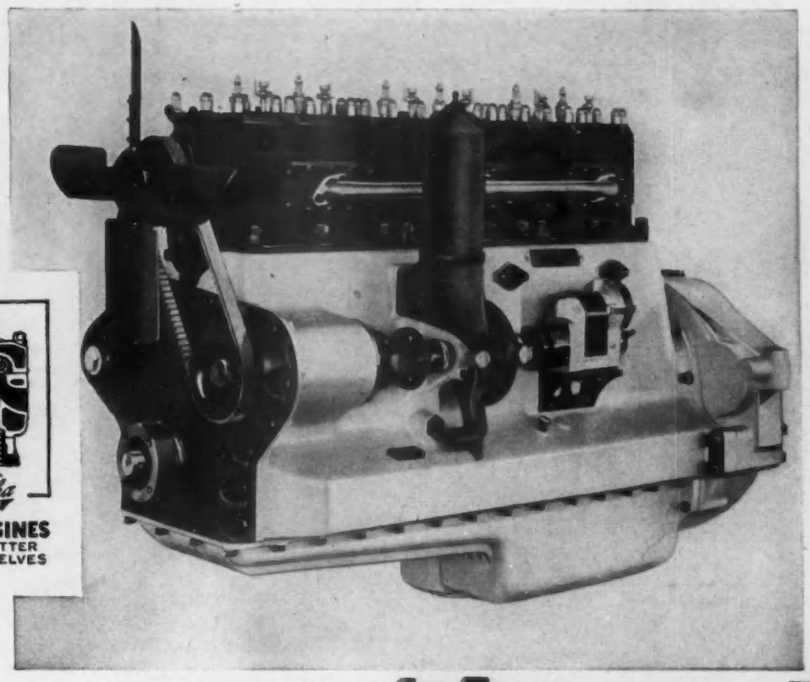
WAUKESHA



They Stand the Gaff

The wrack and strain of heavy haulage—the daily grind of constant loads—these are the conditions that *your* job puts up—and that Waukesha engines are built to lick. Thousands of Waukesha engines in heavy-duty have proved their economy by refusing to quit till the job is done. If your haulage must go on—if interruptions and lay-ups can't be tolerated—then a Waukesha under the hood is the surest answer. "Over 100,000 miles on our five ton truck and we couldn't take a single shim out of the bearings, while the valves have only needed grinding twice," is not an uncommon report. Your next truck must have a Waukesha power plant to be the last word. Write for Bulletin 682.

WAUKESHA ENGINES



Dependable materials are the best assurance of dependable performance

Left: Heavy duty 6-cylinder truck engine with Nickel Chromium Steel inlet valves and crankshaft. Cylinders are Nickel Cast Iron. Mfd. by WAUKESHA MOTOR CO., Waukesha, Wis.

Below: Nickel Chromium Steel crankshaft used in Waukesha heavy duty engine.

WAUKESHA MOTOR CO. *with 20 years' automotive experience . . . Uses Nickel Alloy Steel Valves and Crankshafts*

THE Waukesha Motor Company was early to recognize the commercial value of the hardness, toughness, strength and long wearing properties of Nickel Alloy Steels in engine parts. Nickel Chrome Steel crankshafts were featured in Waukesha catalogs as far back as 1913.

The smoothness of operation which distinguishes the Waukesha 100 H.P., model 6-RB, six cylinder heavy duty truck engine is secured largely by its use of a 3½ inch crankshaft forged from Nickel Chrome Steel and heat treated to give 150,000 pounds per square inch tensile strength. The Company reports that the results obtained have been uniformly satisfactory. Many users of Waukesha truck motors state that 100,000 miles between bearing adjustments is common and 200,000 miles of hard city driving without regrinding the crankshaft is not unusual.

Well-Known Trucks Using Waukesha Engines

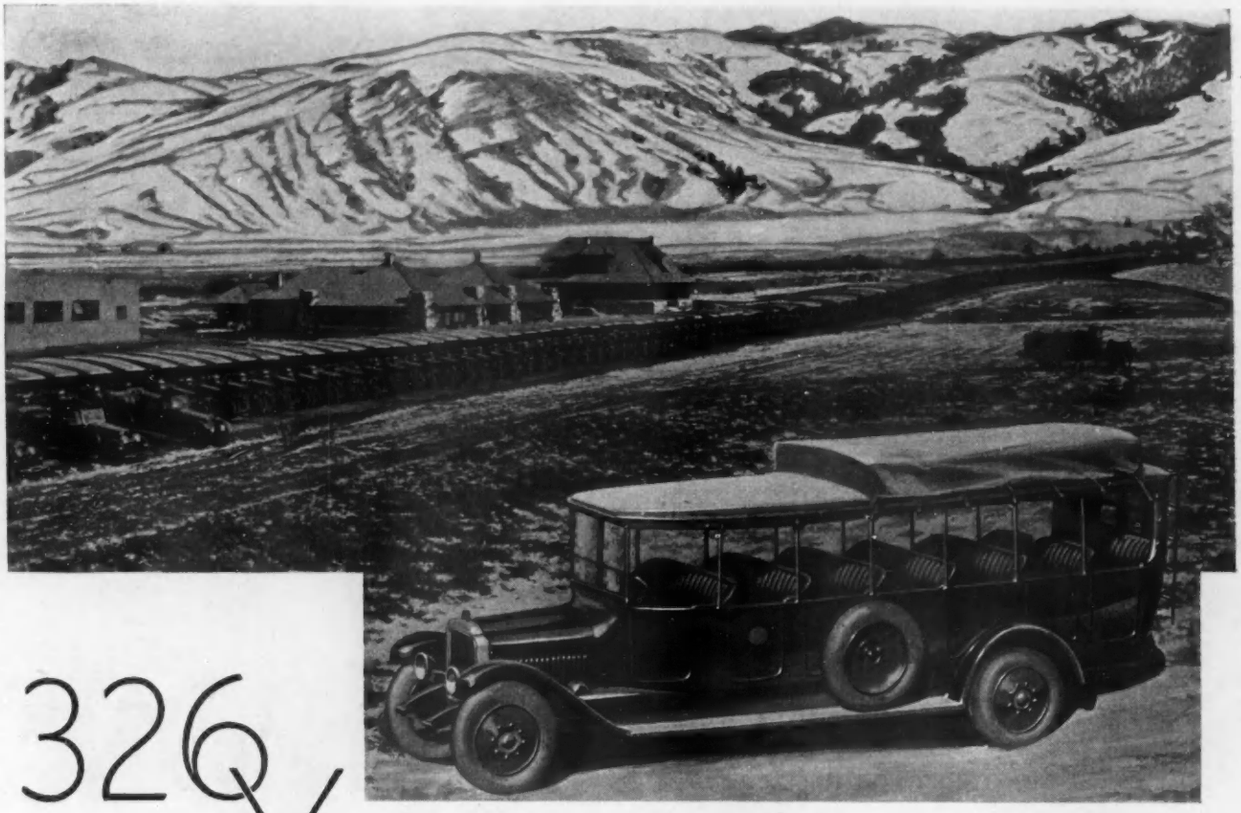
Sterling
F. W. D.
Chicago
Nelson Le Moon
Walter
Ward La France
La France Republic
Federal
Fageol
and many others

Extensive tests have shown that the average, maximum and minimum tensile values of Nickel Alloy Steels vary less from heat to heat than those of other commercial steels. Their widespread use for highly stressed parts of truck, tractor and airplane engines is conclusive evidence that they provide a better combination of hardness with toughness and wear-resistance than any other available material

Nickel
FOR ALLOY STEEL

SEND FOR "BUYERS' GUIDE TO NICKEL ALLOY STEEL PRODUCTS"

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.



326 Yellowstone buses

to be equipped with

HOUDAILLE

PRONOUNCED "HOO-DYE"

hydraulic double acting

SHOCK ABSORBERS

Sound business judgment—not sentiment—dictated the placing of this huge order.

These 326 full sets of Houdaille Shock Absorbers constitute an investment yielding big returns in comfort, safety, good will, and increased patronage—together with the assurance of longer bus life and reduced maintenance cost.

Houdailles are being profitably used on a great many other truck fleets protecting fragile loads, and guarding the chassis from destructive road shocks.

Houde Engineering Corporation

Buffalo, N.Y.

A DIVISION OF HOUDAILLE-HERSHEY CORPORATION

PIONEERS AND WORLD'S LARGEST PRODUCERS OF HYDRAULIC DOUBLE ACTING SHOCK ABSORBERS

LEADERS SELECT LEADERS

Day-Elder Model HBF, 2 ton, 186" wheelbase.

"WHO owns Day-Elder Trucks?" In every territory served by Day-Elder dealers, outstanding organizations comprise the list of Day-Elder owners.

Successful buyers take nothing for granted. Facts and specifications are their only standard of measure, and it is on this basis that such concerns repeatedly select Day-Elder Super-Service Sixes.

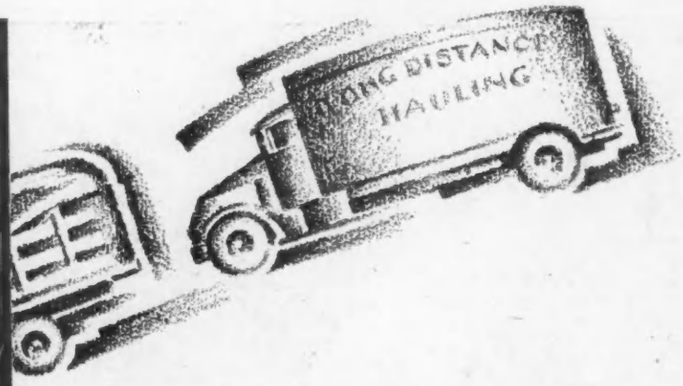
To make the tie-up complete between this LEADING line of trucks, and your LEADING prospects, let the Day-Elder Franchise help you become the LEADING truck dealer in your territory.

Our liberal arrangements go beyond the letter of the Franchise. We render close cooperation for the stimulation of your business and assist, or direct your sales-promotion program.

Day-Elder means net annual profits of $25,000 or more for you. If interested, write for Franchise details.

NATIONAL MOTORS MFG. CO.
464 Coit Street
Irvington, N. J.

DAY-ELDER
SUPER SERVICE SIXES



Reline Your Brakes . . . . In Less Time . . . . . Less Often

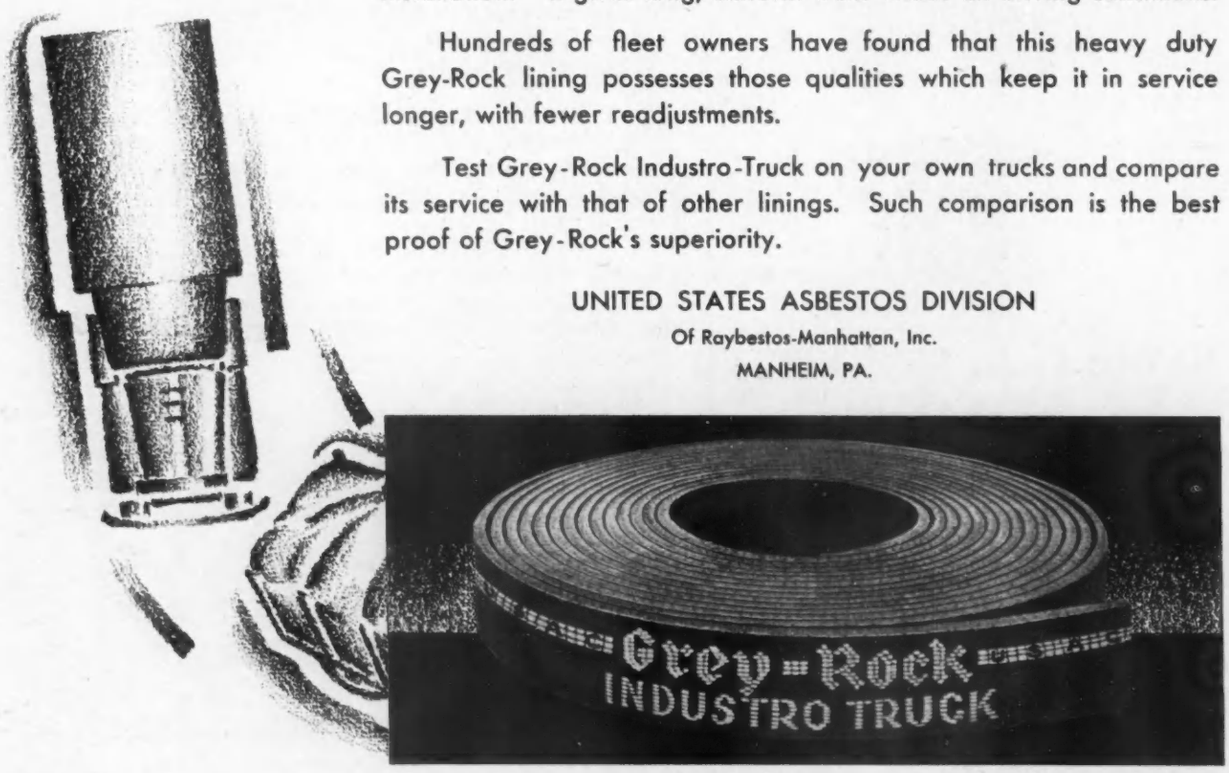
Less frequent brake relinings—less installation time—fewer re-adjustments result in lower brake maintenance costs and keep your fleet in active service. The selection of the proper brake lining will increase the earning capacity of your trucks and reduce the cost of brake repairs.

Grey-Rock Industro-Truck Brake Lining, with its positive accuracy and patented "smooth ground surface," can be permanently adjusted at installation. It gives long, uniform wear under all driving conditions.

Hundreds of fleet owners have found that this heavy duty Grey-Rock lining possesses those qualities which keep it in service longer, with fewer readjustments.

Test Grey-Rock Industro-Truck on your own trucks and compare its service with that of other linings. Such comparison is the best proof of Grey-Rock's superiority.

UNITED STATES ASBESTOS DIVISION
Of Raybestos-Manhattan, Inc.
MANHEIM, PA.



Cleveland is a transfer center for iron ore, soft coal, lumber. Cleveland Cartage Company has added 35 Autocars to its fleet since October 1928. Here is a new 6-cylinder 3-ton Autocar Ranger, one of this fast growing fleet.

Versatility...

The truly versatile athlete is the one who is equally proficient at every sport he tries. The foundation of his versatility is a stout heart and exceptional muscular co-ordination.

The versatility of Autocar Motor Trucks is versatility in a very broad sense. It includes the versatility of the individual truck, founded in the stout heart and exceptional co-ordination it obtains from precision building methods in the Autocar plant. It includes the versatility of design embodied in 46 Autocar Models, covering the full range of duties to be performed from 1½ ton delivery service to 12-ton tractor work. It includes the versatility of Autocar service after the sale, made possible by a nation-wide network of direct factory branches. Autocar owners experience this versatility and take pride in re-ordering Autocars.

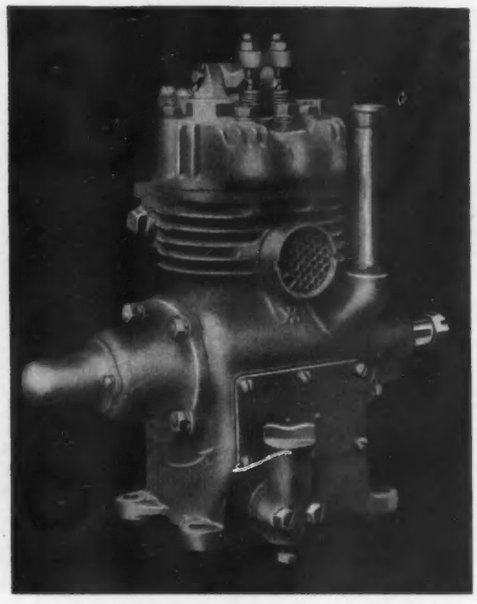
There are Autocar dealer franchises available.

PRECISION BUILT

AUTOCAR TRUCKS

The AUTOCAR Company, Ardmore, Pa., Established 1897

A SERVICE THE WORLD HAS KNOWN



THE HEART OF THE AIR BRAKE, this sturdy compressor, built with watch-like precision, furnishes a dependable air pressure for the operation of Westinghouse Automotive Air Brakes and other devices such as door operating machinery and pneumatic horns.

FOR 61 YEARS

Since 1869, the Westinghouse Air Brake Company has pioneered, developed and manufactured power brake control for the world's rapidly expanding transportation industry . . . Today's Westinghouse Automotive Air Brake is an achievement backed by these years of experience and limitless research.

As dependable as the Westinghouse control which safeguards rail transportation the world over, the Westinghouse Automotive Air Brake has given modern, heavy duty highway vehicles the perfect balance for present day speed, power and traffic conditions with a wide margin for continued development.

Westinghouse engineers, specialists in power brake control, are daily cooperating with both the operator and manufacturer to determine the perfect brake for their respective vehicles. Their services are offered without obligation and may be obtained by addressing the WESTINGHOUSE AIR BRAKE COMPANY, Automotive Brake Division, Pittsburgh, Penna.

6272

WESTINGHOUSE Automotive AIR BRAKES

Get on the BANDWAGON !

When all else is said and done, everyone **MUST** make money! That fact is inescapably true . . . because self-preservation is the **FIRST** law of nature. Therefore, whether you sell "shoes or ships or sealing wax" . . . . or motor trucks . . . . you owe it to yourself to represent the article which sells **EASIEST, QUICKEST** and **STAYS** sold best! ¶ If you intend to sell silver, then choose the trademarked line that *everyone* knows . . . . and if you intend to sell motor trucks, *choose* by the same formula. Remember this: the article about which the public already knows, in which the public *already* has complete confidence, is *half* sold before you or your salesmen speak. ¶ Furthermore, the manufacturer of any article which has obtained public confidence and acceptance has done so **ONLY** by sustained, and superior quality and character in the product. That is why buyers of **GOTFREDSON TRUCKS** do not buy *one* **GOTFREDSON** . . . . and then switch to another . . . . but, instead, inevitably come back for another when an additional Truck is needed. ¶ Get on the **GOTFREDSON** Band Wagon yourself . . . . and see how rapidly the world's greatest motor truck, because of the confidence it has deserved and won from the public, will carry you to business independence. *NOW* is the time . . . . for a few territorial franchises are available today which probably will not be later.

Upon Request All Details of Franchise Arrangement Will Be Immediately Sent to You.

Gotfredson TRUCKS

The
ROBERT GOTFREDSON
TRUCK COMPANY

3601 GRATIOT AVE., DETROIT, MICHIGAN

How

"LOW"

are your

COSTS PER MILE?

You know that *mileage* is the only way to measure tire value. *Cost per mile* is the only figure that counts.

But even when you get your costs per mile, how are you going to know whether they're high or low? How can you be sure that every tire dollar is buying all the mileage you are entitled to?

It's a job for an expert tire engineer, and that's where we can help. We know, from years of experience, just what service tires should give under all operating conditions. We can tell *you* just what tire mileage, and what *cost per mile*, you should expect on your own trucks.

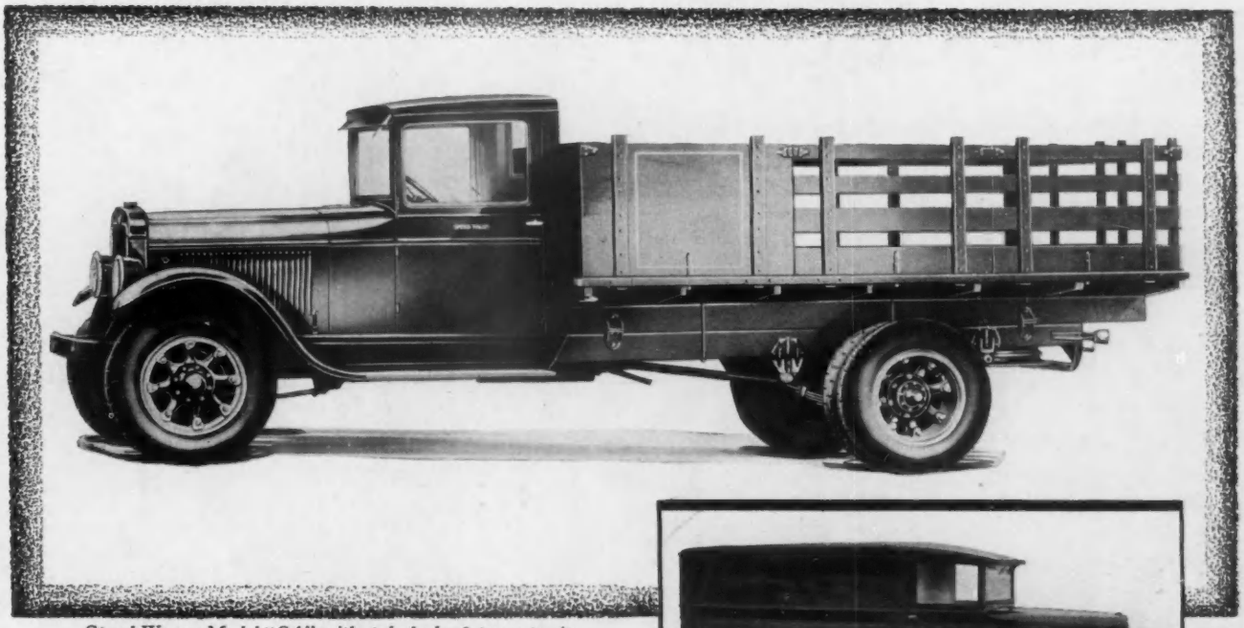
Why not get an expert analysis of your truck operations, without cost or obligation? Write, today, to the Fisk Transportation Engineering Department and find out where you stand on tires.

The Fisk Tire Company, Inc., Chicopee Falls, Mass.

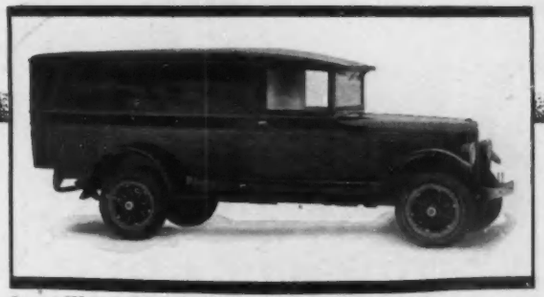
mileage

FISK

These Big Speed Wagons Haul *Twice* the Tonnage Per Day of Ordinary Type Trucks!



Speed Wagon Model "GA" with stake body. 3-ton capacity



Speed Wagon Model "FA" with panel body. 1½-ton capacity

Big Load Capacity Is No Longer Enough. *Say Leading Truck Users*

SPEED WAGON Economy, Flexibility, Long Life Set New Efficiency Standards in Hauling

A NEW day has dawned in commercial transportation—a day that counts *speed* and *flexibility* of far greater importance than mere load capacity in trucks. The *Time Element* now is the greatest factor governing both profit and economy in today's hauling, say transportation experts.

Reo Meets the "Time Element"

Reo has met this problem with an utterly new type of transportation—big trucks that step away under full loads with passenger car speed, flexibility and economy. Big trucks that handle twice the tonnage of ordinary, plodding types, in a day's mileage output. By proper ratio of speed to tonnage and frequency of trips they eliminate delays at any point that create a congestion elsewhere. Trucks that not only deliver materials *faster*, but *cheaper*—mile after mile—for an unbelievably long, trouble-free life. They offer a far better relationship between the dollars invested and the dollars of revenue whether you haul for yourself or for others. Engineers have long predicted trucks like these—and Reo has built them.

Built for Long Life

Chrome nickel alloy iron cylinder blocks—the hardest of all cylinder materials; new aluminum alloy pistons—an exclusive Reo formula—all outwearing 3 ordinary pistons—in fact, every improvement in design and manufacture that could lengthen life and increase efficiency, has been added . . . 6-cylinder engines; 7-bearing crankshafts; full pressure lubrication; extra heavy frames and big bearings; 4-wheel, 2-shoe, internal expanding hydraulic brakes; 4-forward speed transmission; Myers built-in magazine chassis lubrication; only the very best tires, and other features are part of Speed Wagons . . . There are Speed Wagons for every hauling need—trailer equipment now making Speed Wagons' utility nearly unlimited.

Opportunity for Dealers

Write for facts on the generous Reo franchise. Reo dealers are enjoying unprecedented sales success with Reo Flying Cloud pleasure cars and Reo Speed Wagons. All inquiries treated confidentially.

REO MOTOR CAR CO., *Lansing, Mich.*

REO LONG LIFE

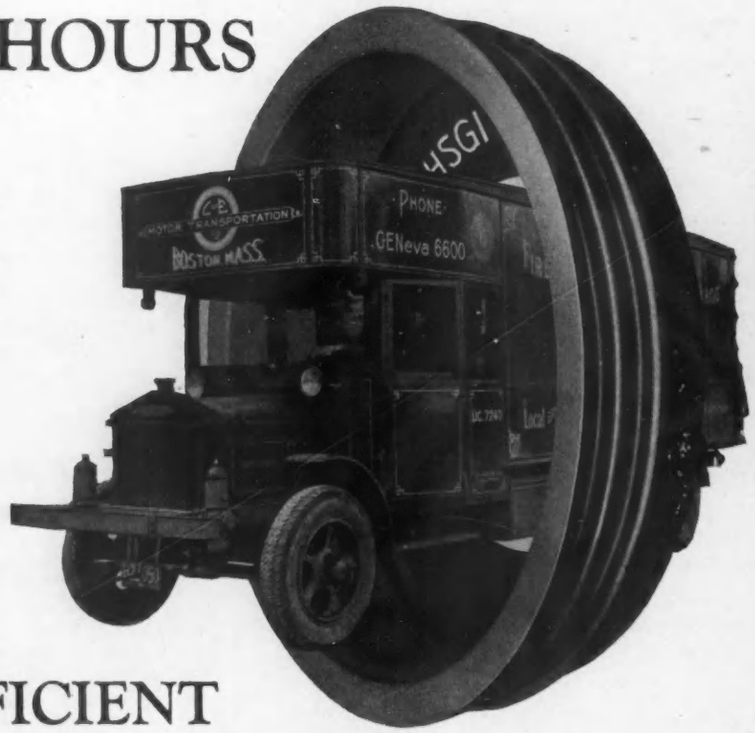
224

SPEED WAGON

HUNT-SPILLER AIR FURNACE GUN IRON BRAKE DRUMS

LONGER HOURS

H S G I
Reg. U. S. Trade Mark



OF EFFICIENT PROFITABLE BRAKE SERVICE

The earning power of your trucks *is largely determined* by the wearing qualities of the units bearing the greatest strain.

Brakes most decidedly come under this classification. They require careful attention, and frequent inspection for safety on the road.

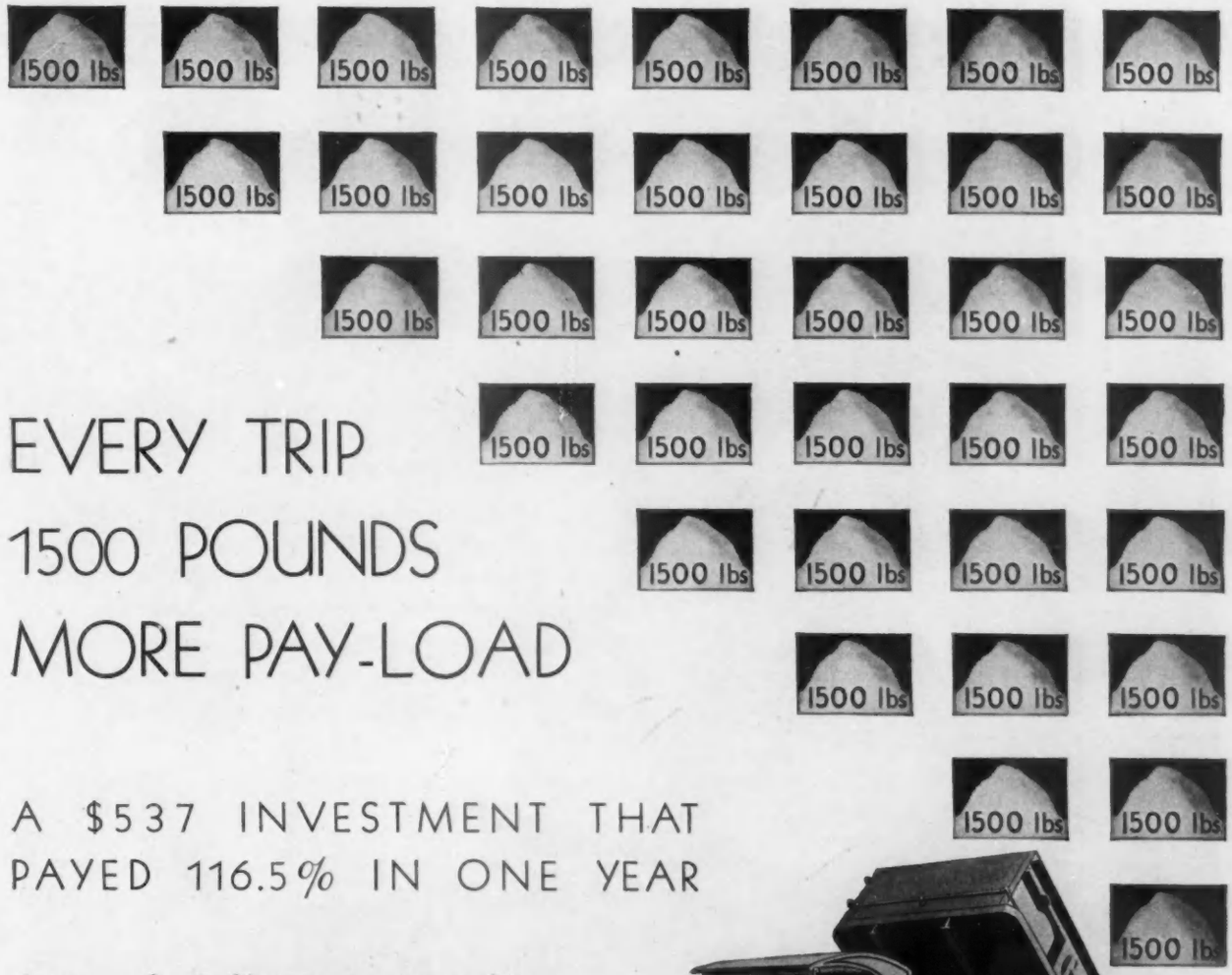
HUNT-SPILLER AIR FURNACE GUN IRON BRAKE DRUMS minimize brake adjustment . . . wear smooth . . . maintain an even coefficient of friction throughout their life. Cut down brake expense. Write us for information.

AIR FURNACE
GUN IRON
for BRAKE DRUMS

HUNT-SPILLER MFG. CORP

J. G. Platt, *Pres. and Gen. Mgr.* V. W. Ellet, *Vice-Pres.*

Office and Works
383 Dorchester Avenue
South Boston, Mass.



EVERY TRIP 1500 POUNDS MORE PAY-LOAD

A $537 INVESTMENT THAT PAYED 116.5% IN ONE YEAR

A return of 116.5% on money, invested in a truck, probably sounds like a lot of Wall Street talk to you. But here is an actual incident, with all the facts exposed.

A Pennsylvania trucking company decided to try an Alcoa Aluminum body on a 6½ ton Mack Truck, for hauling sand. The body and hoist, when built of the light, strong Alloys of Alcoa Aluminum, weighed 1,500 lbs. less than the old-style steel construction.

With its old-fashioned steel body, this truck hauled 12,000 lbs. With its new Alcoa Aluminum body, it was possible to pile on 13,500 lbs.—1,500 lbs. more pay-load—1,500 lbs. less dead-load.

There was an added initial cost of $537, over the steel, for the Alcoa Aluminum body and hoist. But the extra 1,500 lbs. of pay-load carried each trip brought added profits. In a year's time, these showed a return of 116.5% on the $537.

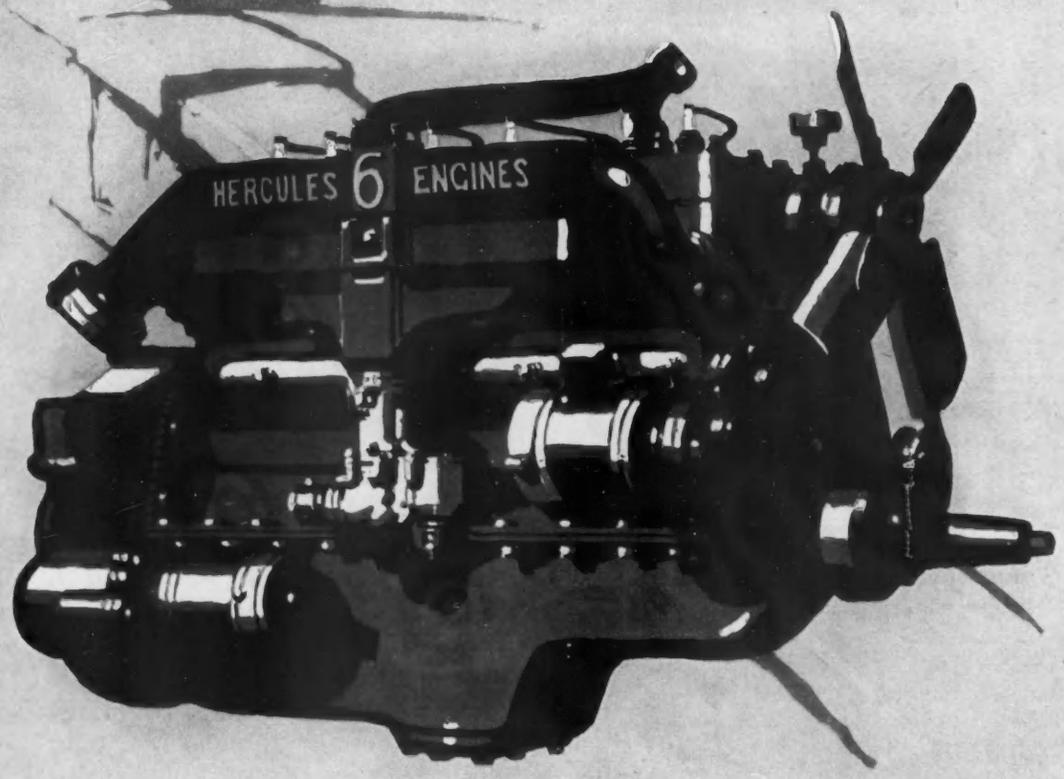
Despite their light weight, the Alloys of Alcoa Aluminum have great strength. They stand up under the roughest conditions. Many Alcoa Aluminum bodies are now in use on heavy duty trucks. A representative from our nearest office will be glad to talk with you about the use of Alcoa Aluminum Truck Bodies. ALUMINUM COMPANY of AMERICA; 2439 Oliver Building, PITTSBURGH, PA. Offices in 19 Principal American Cities.

ALCOA ALUMINUM

HERCULES

ENGINES

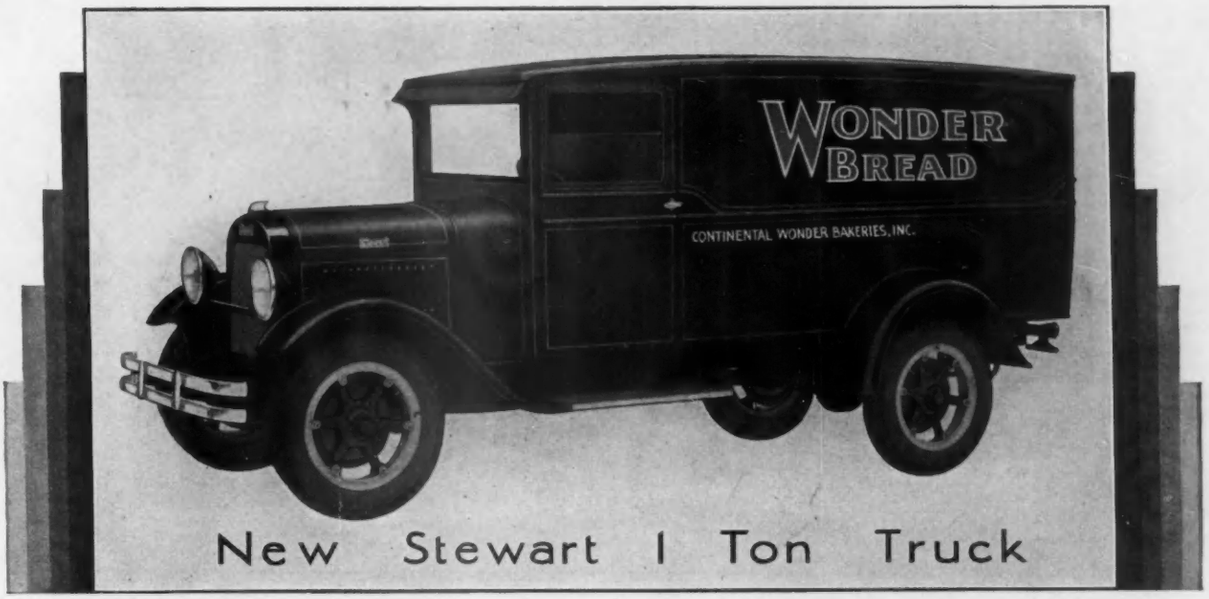
Leading manufacturers of trucks and buses rely on Hercules Power. Twin Coach — pioneer in the big bus field — standardizes completely on Hercules Engines built to Twin Coach specifications. Simple and rugged — built expressly for continuous heavy-duty service — Hercules truck and bus Engines are available in a complete line of four and six-cylinder models.



HERCULES MOTORS CORPORATION

CANTON, OHIO, U.S.A.

WEST COAST BRANCH: LOS ANGELES, CAL. ✱ MID-CONTINENT BRANCH: TULSA, OKLA.



New Stewart 1 Ton Truck

The Greatest Dollar for Dollar Value ever offered in Truckdom

The New Stewart 1 ton truck is the sensation of the year in truckdom. Everywhere storms of approval have greeted its appearance, its performance and its long list of outstanding mechanical features formerly found only on costly trucks. Never before has genuine Stewart quality sold at so low a price.

People who said it couldn't be done are admitting that Stewart did it. Not one deviation from the usual Stewart quality yet a price that is unprecedented. The same quality that has long marked Stewarts as "America's Greatest Truck Value" is embodied in this model. From radiator to tail light an honestly rated truck built by exclusive truck makers entirely of truck parts.

Stewart owners know by experience that the average life of a Stewart is 5 years or more. Ask the Stewart owners in your community the results they are getting. Expect the same performance, the same long life at low operating cost from the new Stewart one ton. You won't be disappointed.

$695 CHASSIS

MODELS

BEVEL AXLE	WORM AXLE
1 ton 4 Cylinder $695	2 ton 6 Cylinder $2290
1 ton 6 Cylinder $795	2½ ton 6 Cylinder $2690
1¼ ton 6 Cylinder $1295	3 ton 6 Cylinder $3290
1½ ton 6 Cylinder $1495	3½ ton 6 Cylinder $3690
2 ton 6 Cylinder $1695	5 ton 6 Cylinder $4990
2½ ton 6 Cylinder $1990	6-7 ton 6 Cylinder $5700

All prices f.o.b., Buffalo, N. Y.

Stewart
MOTOR TRUCKS

STEWART MOTOR CORPORATION
BUFFALO, N. Y.

Export Branch: 1 Broadway (Dept 3.)
NEW YORK CITY, U. S. A.

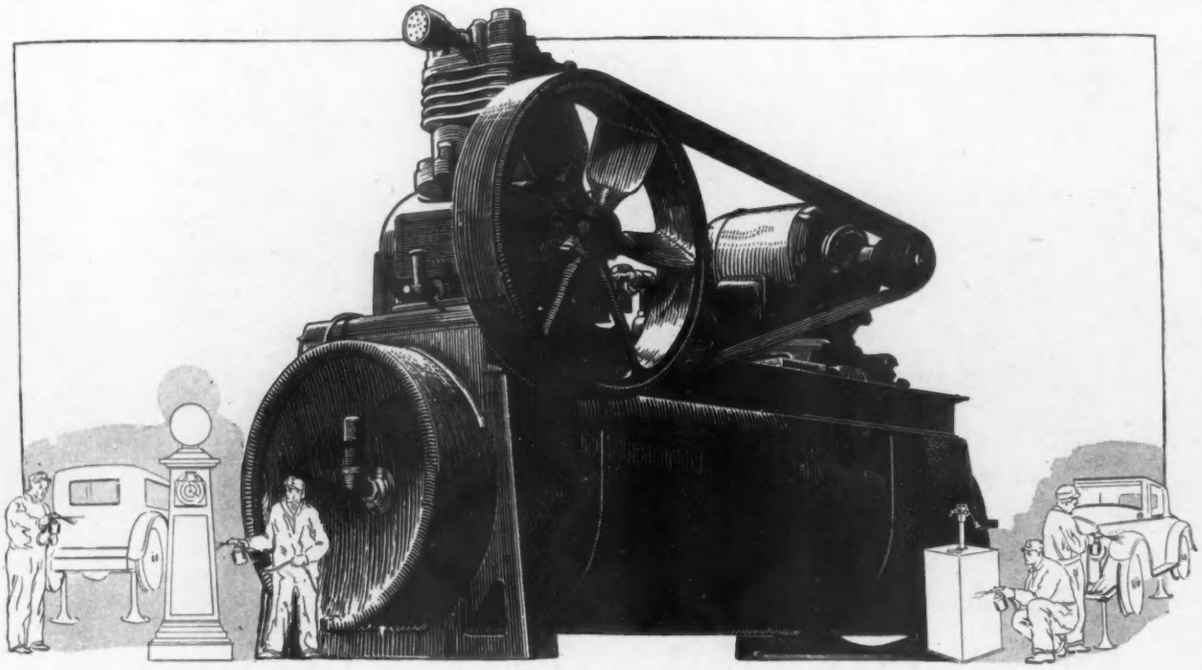
Cables: Stewartruk New York
Codes: Acme, Bentley.

SPECIFICATIONS

ENGINE—Four cylinder truck motor, 3¾" bore, 4½" stroke. Six cylinder motor at extra cost.
CARBURETOR—Latest Stromberg with accelerator pump, fuel economizer and air cleaner.
IGNITION—Delco-Remy—engine driven distributor.
GENERATOR—Delco-Remy—direct gear driven also Delco-Remy starter with Bendix gear shift.
TRANSMISSION—4 speeds forward and one reverse. Shafts mounted on annular bearings.
STEERING GEAR—Ross cam and lever type.
FRAME—Pressed steel side rails 6" deep.
REAR SPRINGS—50" long, 2½" wide, bronze bushings, 11 leaves.
REAR AXLE—Truck type, heavy cast housing. Heavy type differential mounted on Timken roller bearings. Strong enough for dual wheel equipment.
BRAKES—Four wheel Bendix.
SPICER DRIVE SHAFT—3" tubular, for standard wheelbase with metal covered, dust proof Spicer joints. Three joint shafts on 140" wheelbase chassis.
WHEELS—Metal. Six spokes, demountable rims.
WHEELBASE—Standard wheelbase 130". Special 120"; at extra cost 140".

Stewart Trucks have won—By costing less to run

BRUNNERAIR MULTIPLIES PROFIT



SPRAY PAINTING RESULTS DEPEND UPON THE EQUIPMENT

SPRAY painting has established itself beyond question as the modern and efficient method of applying paint, lacquer, varnish and special finishes.

But there exists a vast difference in the quality of spray painting jobs—due almost entirely to the type of equipment used. First class results can be accomplished only with dependable, properly designed equipment.

The Brunner equipped shop is assured a dependable air service which lowers costs and cuts time of operation. Brunner Guns, because of perfect atomization, produce a uniform, high quality finish. They paint from three to six times faster than the hand brush.

The Brunner line includes air compressors, car washers, spray guns, and complete spray painting outfits for every automotive requirement and installation. They are made by the oldest and largest builder of pneumatic garage equipment in the world. For a quarter century the name, Brunner, has stood for quality, dependability and honest value. Ask your jobber.

BRUNNER MFG. CO.
UTICA, NEW YORK
KANSAS CITY, MO. TORONTO, CAN.

HAVE YOU SEEN

the new Brunner Air Compressor Manual? A complete handbook on air compressors and equipment, invaluable to service men. Write Dept. S-3 for your copy today.

BRUNNER — AIR — COMPRESSORS
A WORLD'S STANDARD OF DEPENDABILITY

BROWN-LIPE GEAR

The West Has a Way of Getting What It Wants!

Out on the West Coast just anything doesn't fit the bill. They move a little faster—they have the pioneer zip and snap—and when they decide what they want—they make it.

That is why you will find a company like Kenworth locating in Seattle, Washington, and concentrating on a product that will be ideally suited to the hauling needs of its country—the Northwest. In their new, modern plant, Kenworth is producing motor trucks for every commercial pursuit, in capacities from 1 to 10 tons.

Efficient — dependable — minimum maintenance expense—maximum service—Kenworth is giving the West what it wants.

Perhaps no little share of Kenworth maximum performance with minimum operating expense —more days rolling and few in the shop—may be credited to the Brown-Lipe Clutches and Transmissions that go into these sturdy units.

"Brown-Lipe Equipped" is helping Kenworth sell trucks. Let Brown-Lipe improve your sales story.

BROWN-LIPE GEAR CO.

ASSOCIATED **Spicer** COMPANIES

BROWN-LIPE	SALISBURY	SPICER	PARISH
CLUTCHES and TRANSMISSIONS	FRONT and REAR AXLES	UNIVERSAL JOINTS	FRAMES and STAMPINGS
BROWN-LIPE GEAR CO. SYRACUSE, NEW YORK	SPICER MFG. CORP., TOLEDO, OHIO		PARISH PRESSED STEEL CO., READING, PENNA.

OVERCHARGING

buckles battery plates . . .

Buckled plates puncture insulation

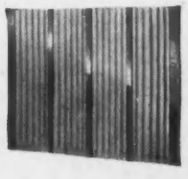
but not in a fortified Willard

WHEN a storage battery gets overcharged, as often happens during long daylight runs, heat is generated in its plates. Persistent overheating buckles them, causes the edges to turn in, raises high spots on their faces.

These edges and high spots press hard into the insulation that separates the plates. Ordinary wood insulation in a battery is apt to wear through under this punishment. Then the battery goes dead, and must be either re-insulated or replaced.

In Willard Thread-Rubber Batteries a more durable insulating material is used. It has hard rubber ribs to defy wear, and thousands of cotton wicks through its body to stimulate the battery's activity. Thread-Rubber insulation makes the most economical type of battery for truck and bus service.

Buckled plates from an overheated battery. Note the high spot where wear on the insulation is concentrated.



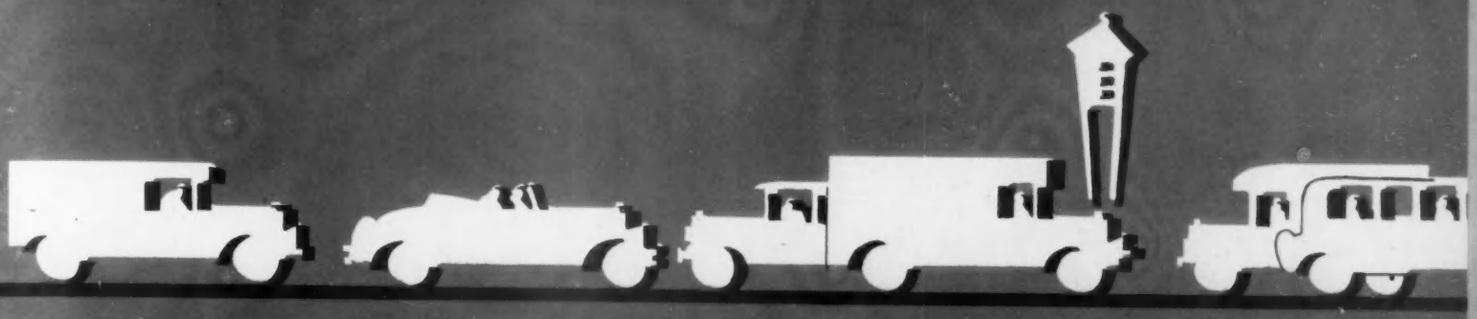
A Willard Thread-Rubber insulator, that has hard rubber ribs to defeat wear.

STORAGE BATTERIES

Willard

CLEVELAND·OHIO

EATON EQUIPMENT



AXLES
SPRINGS
BUMPERS
EATON-LITES
EASY-ON CAPS
PERFECTION HEATERS

We are truly grateful for the fact that each year brings increasing confidence in Eaton-made products and a broader knowledge that "Eaton" is ever synonymous with Dependability and Quality in automotive equipment

EATON AXLES

THIS staff of Eaton axle engineers and draftsmen is responsible for the solution of many vexing axle problems confronting manufacturers of trucks and buses.

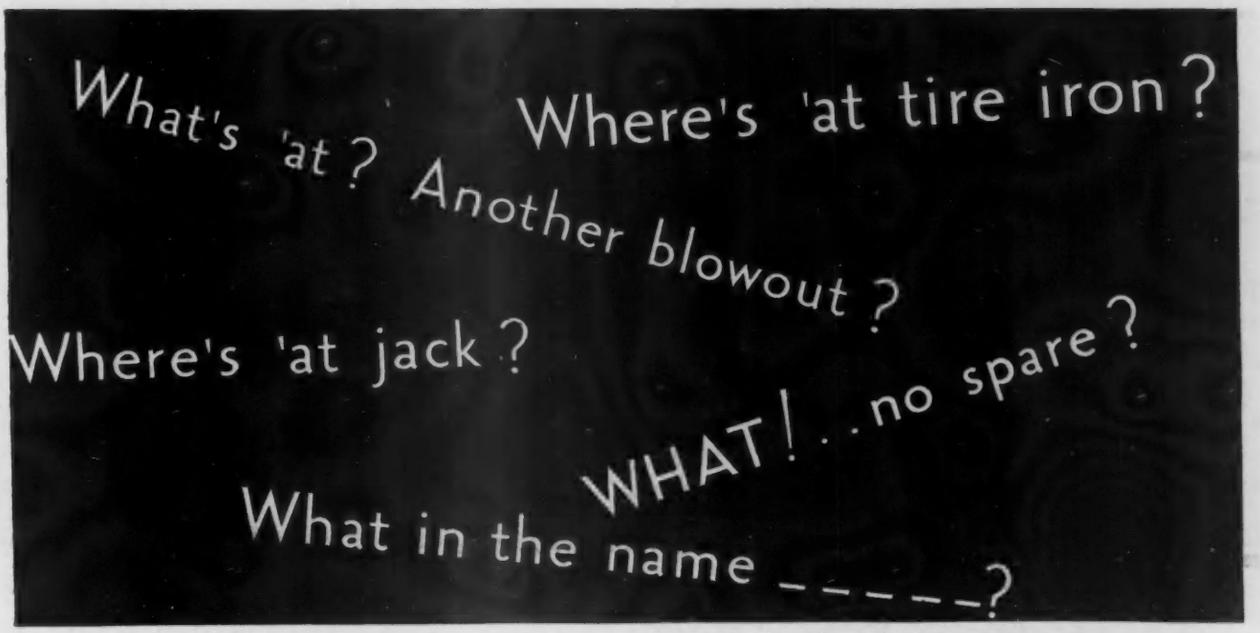
The unfailing performance and low maintenance cost of Eaton Axles is due in no small measure to the devotion of these employees to Eaton's uncompromising standards of highest quality, regardless of cost.

Truck manufacturers are invited to submit their axle problems to us, and share our many years of experience in this highly specialized field.

THE EATON AXLE & SPRING COMPANY
CLEVELAND, OHIO

EATON

for TRUCKS *and* BUSES



Do you have to answer questions like these . . . *in the dark?*

If you do it's just too bad, and outside of offering the usual condolences such as "There, There," about all we can do is recommend that you use Budd-Michelin Dual Wheels.

For blowouts on a Budd Dual are just about as rare as kind words from a traffic cop.

With Budd Duals, high tire mileage is far too common to be startling—some truck owners are getting twenty-five, thirty, and even thirty-five thousand miles before they go hunting for new rubber.

And the reason for these phenomenally long hops between tire changes is right in that Double-Nut Mounting that holds a Budd Dual on the hub.

Instead of depending on just *one* set of cap-nuts to hold both sections of that wheel on the hub, Budd Duals hold each section *separately.*

You put on the inner wheel, turn up the inside cap-nuts, and it's there for good. Then you put on the outer wheel, turn the outer cap-nuts right on over the inner ones, and it's on there till you're ready to take it off.

Neither section of that wheel can wiggle an eyebrow. Neither tire can do anything but spin as true as a top. And the extra miles you get out of your tires always show up in the bank.

P. S. *If your present trucks haven't Budd Duals, change-over now. Budd distributors in all principal cities are prepared to supply complete sets and meet all other service requirements.*

BUDD DUALS

Can't wobble

Can't shimmy—

And they stop side-sway!

BUDD WHEEL COMPANY, DETROIT

© 1930—B. W. Co.

YOUR SALES VOLUME
CAN BE INCREASED—
REPEAT ORDERS
WILL BE SECURED—
WITH
GALION ALL STEEL BODIES

WRITE FOR FACTS TODAY

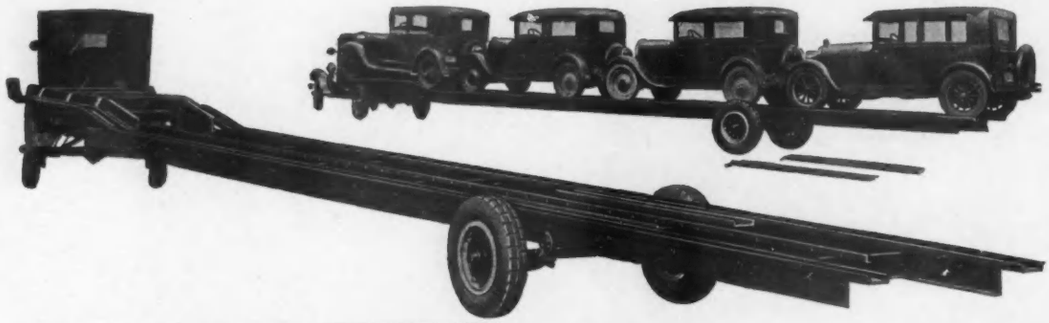
A progressive dealer is not only attracted by a handsome profit to sell dump body equipment, but also by the minimum amount of servicing to keep the bodies on the job. Often an enticing margin is completely consumed by service charges. Consequently, this is not so profitable.

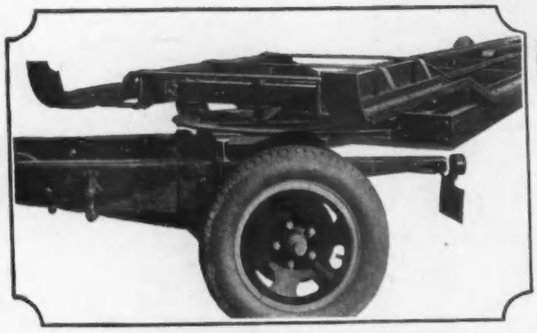
Galion Allsteel Dump Bodies are beyond the experimental stages. They serve efficiently and indefinitely. Sell them to your customers—repeat orders will follow. Get the facts for your 1930 program.

WRITE FOR FACTS TODAY

THE GALION ALLSTEEL BODY CO., Box 5, GALION, OHIO

GALION ALLSTEEL BODIES





Note the closeup on the simplicity of attachment. Few moving parts eliminate possibility of maladjustment and repairs. Note also the Dual disc wheels . . . they are Budds. Timken Bearings are used to assure you the uttermost in freedom of swivel and bearing performance. Details of other equally refined features upon request.

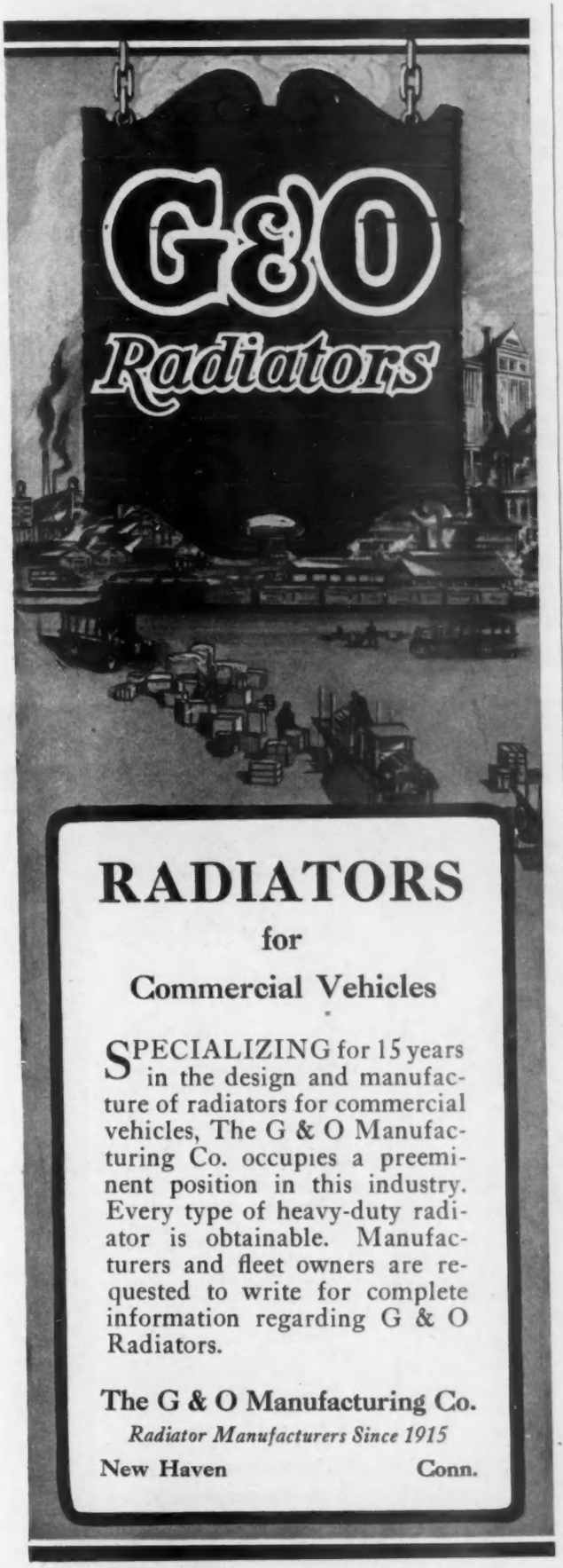
Kingham Auto Trailer

This is but one of the many products offered you by the Kingham Trailer Company. Such features as the Alemite-Zerk lubrication; half elliptic underslung springs. Dual disc Budd wheels, Timken Bearings, and low loading height make it one of the outstanding transport buys of the year. Built in two capacities, five ton and four ton, with 55 and 50 foot approximate lengths.

If you have not received your latest catalog with specifications and details on the complete line . . . write for it today. It presents a new angle to winch and trailer purchases.

KINGHAM TRAILER COMPANY
LOUISVILLE, KENTUCKY

A LOAD BEHIND IS A TRIP AHEAD



RADIATORS

for

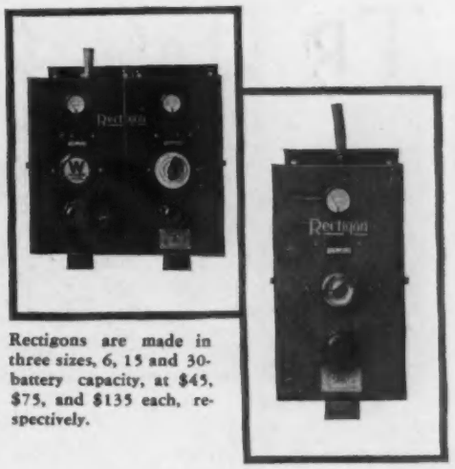
Commercial Vehicles

SPECIALIZING for 15 years in the design and manufacture of radiators for commercial vehicles, The G & O Manufacturing Co. occupies a preeminent position in this industry. Every type of heavy-duty radiator is obtainable. Manufacturers and fleet owners are requested to write for complete information regarding G & O Radiators.

The G & O Manufacturing Co.

Radiator Manufacturers Since 1915

New Haven **Conn.**



Rectigons are made in three sizes, 6, 15 and 30-battery capacity, at $45, $75, and $135 each, respectively.

Drive your cost down with RECTIGON

THE cost determines your profit on battery charging. In Rectigons you have a low first cost, a low upkeep cost and no attendance cost. The Rectigon operates without the need of watching the batteries on charge. You can operate day and night and bank the extra profit from 24-hour operation.

With Rectigons you never have to face any unexpected maintenance expense. The inexpensive bulb is the only item needing replacement and this only at long intervals; it carries a liberal guarantee so the replacement cost amounts to only a small fraction of a cent per battery charged. There is no drop in the efficiency of the Rectigon —the longer you use the Rectigon the less you pay, per hour, for its operation.

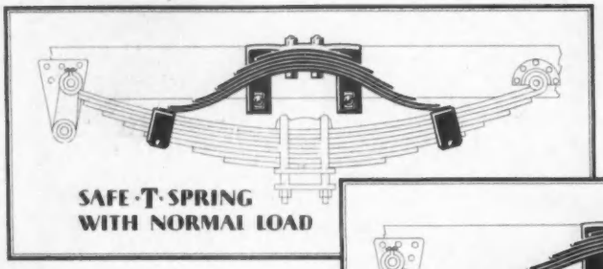
Write for the interesting booklet "More Power to the Battery".

Use only genuine Westinghouse Bulbs for replacement.

Westinghouse

T 31050

TRAINOR SAFE-T-SPRING



SAFE-T-SPRING
WITH NORMAL LOAD

Note arc of main spring. Safe-T-Spring leaves it to function normally under light loads. No addition to the unsprung weight.

Study arc of spring here. Safe-T-Spring has absorbed the excess stress. The extra load is paying the profit.

SAFE-T-SPRING
BROUGHT INTO PLAY BY EXCESS LOAD

No more BROKEN SPRINGS!

Equip with the Safe-T-Spring and you will be able to carry a payload every time and at the same time protect your truck. They make possible added profit without increasing costs. Get the complete story today.

TRAINOR NATIONAL SPRING CO. · · · NEWCASTLE, IND.

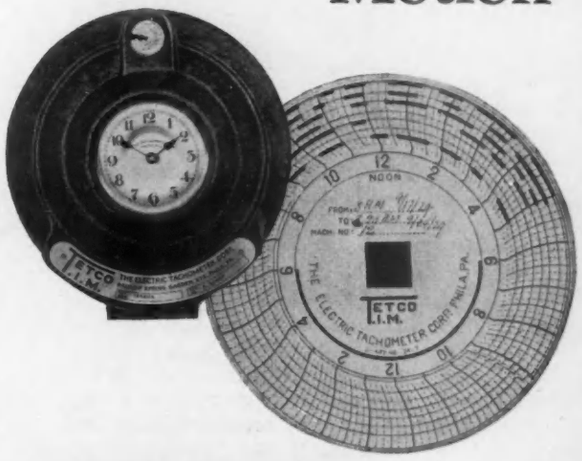
Only Two Dimensions

Not only is the efficiency of the Kinnear Rolling Door overwhelmingly greater than old-fashioned swinging doors from a standpoint of time saved in opening and closing, but it requires no floor space whatever. Moving as it does in a vertical plane, it takes up no usable space, either opened or closed. Over a period of even a few years, the savings effected make Kinnear Rolling Doors an investment of the highest order.

Write for "Modern Uses for Kinnear Steel Rolling Doors" our new catalog, just issued.

The KINNEAR Manufacturing Co.
1270-1280 Field Avenue
COLUMBUS, OHIO
Branch Offices in Principal Cities

"Time-in-Motion"



TETCO T.I.M. *Tells the Tale*

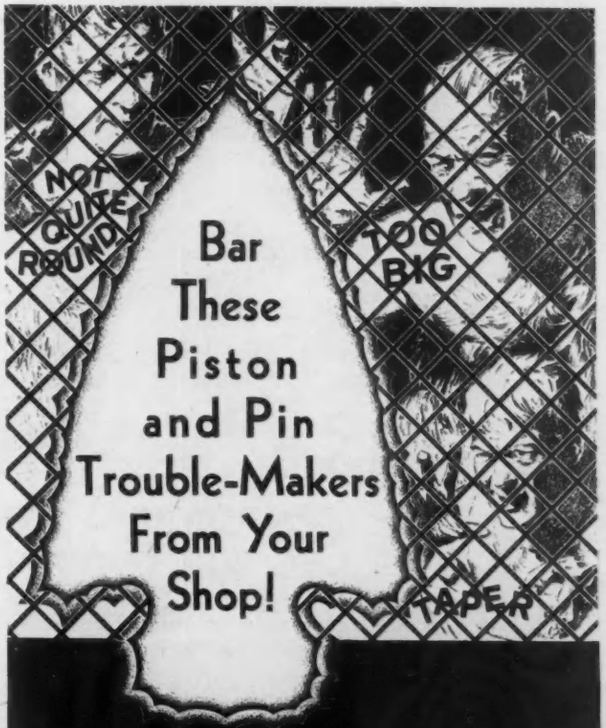
TETCO T. I. M. will tell you exactly what your trucks are doing and when. It gives you a definite check on truck operation. But we don't want to give you the impression that TETCO T. I. M. is merely a tattle-tale. It isn't. It likes to tell a good story and it does whenever it can. But—always it tells the truth—always it sticks to the facts.

TETCO T. I. M. is an improved "Time-in-Motion" Recorder for trucks and buses. The seven day recording device enables you to check on long hauls requiring more than 24 hours. Time and expense of changing charts are reduced to once a week instead of every day. Day by day comparison is made easier with 7 days' record on one chart instead of on seven charts. Change from one day to another is made automatically and *second day's record cannot interfere with the first day, etc.*

No mechanical or electrical connections are necessary. A steel stylus operating on a waxed chart does away with old-fashioned pen and ink. Slow and fast adjustments can be made. Visible clock dial gives driver a time piece and removes his antagonism for operation recorders. These features and others which we will be glad to tell you about may help explain why TETCO T. I. M. is the *most efficient, useful and economical time recorder on the market.*

Distributors are now being appointed. If you are interested in the sales franchise for TETCO T. I. M. in your territory write us at once.

The Electric Tachometer Corporation
BROAD AND SPRING GARDEN STREETS
Philadelphia Penna.



Bar These Piston and Pin Trouble-Makers From Your Shop!

SPEED up motor rebuilding with pistons and pins that fit with the minimum of machining. Arrow Head's rigid inspection assures absolute uniformity of size, structure and quality.

Arrow Head Pistons not only can be fitted more readily, with less machining, but they have the structure to hold their shape under severe working conditions; thereby preventing blow-bys, oil-pumping and other troubles which cause costly breakdowns on the routes.

Pistons furnished finished ground or semi-finished.

The Arrow Head Piston Pin is the most scientifically heat-treated and sturdiest pin on the market. Finished to the closest accuracy—it assures the greatest bearing surface in the fit of the pin to the piston bearing.

Dependable Products

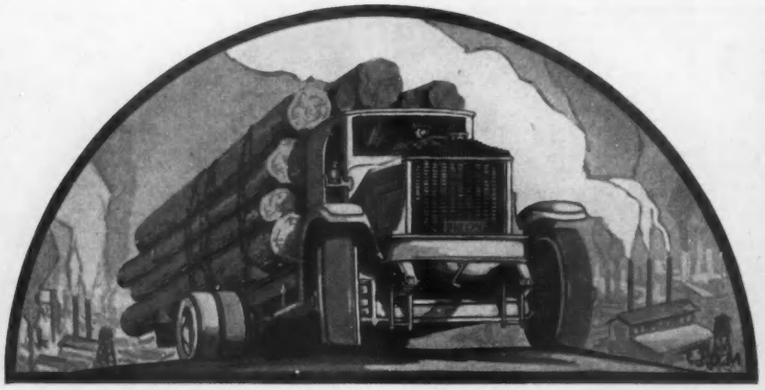
A chart explaining how Arrow Head Pistons and Piston Pins are inspected in Arrow Head plants sent upon request. Write today.

Save 20 machining, inspecting and fitting operations when you rebuild a motor; use Arrow Head Balanced, Fitted Piston and Pin Assemblies—just unwrap and slip into place.

3 regional plants to serve you—
BUFFALO — CHICAGO MINNEAPOLIS
Supported by a national chain of service warehouses

ARROW HEAD STEEL PRODUCTS COMPANY
New York MINNEAPOLIS, MINN. Chicago
Dallas Los Angeles Boston
San Francisco Buffalo Kansas City Atlanta
Canadian Warehouse, 277 William St., Chatham, Ontario
JOBBERS' STOCKS IN ALL LEADING CITIES

Arrow Head
Pistons Fitted With Pins



DIXON'S DOUBLE PROTECTION

Insurance Against Differential and Transmission Troubles!

DIXON'S 677 gives you double protection with its film of graphite and film of grease. A mixture of graphite and grease which is made to exact proportions—as only DIXON can mix them. For the heavy duty service that is demanded of the modern truck, only a lubricant of such guaranteed perfection can suffice. Thousands of fleet owners have discovered the advantages of using DIXON'S 677. Give your trucks this insurance against differential and transmission troubles. Write for circular No. 112-G. JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.

DIXON'S 677 *Graphited Grease*

Fisher-Standard

Announcing
the
New 5 to 7 Ton

Built of Quality Units by Quality Builders of Motor Trucks

Standard MOTOR TRUCKS

WE INVITE COMPARISON

STANDARD MOTOR TRUCK COMPANY

DETROIT, MICHIGAN, U. S. A.

CABLECODE: STANTRUCK

ALBERT FISHER, President

AVAILABLE

J. T. McCarthy Company, old timers in the moving and shipping business in Chicago, selected Available Trucks equipped with Young Radiators, as standard equipment after experience with hundreds of different vehicles over a number of years. For handling the biggest hauling jobs under the hardest conditions, it is noteworthy that Young cooling equipment is invariably selected.

YOUNG RADIATORS

YOUNG RADIATOR COMPANY, Racine, Wis.

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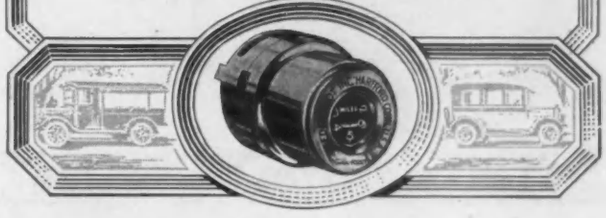

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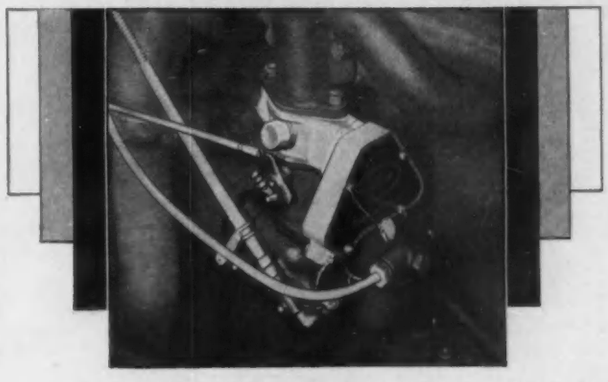

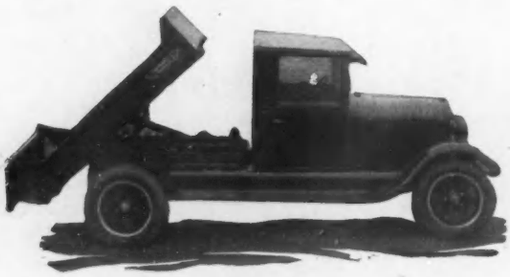

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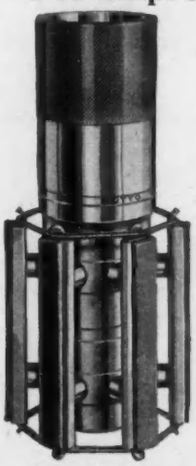

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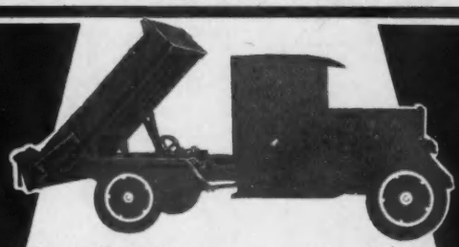

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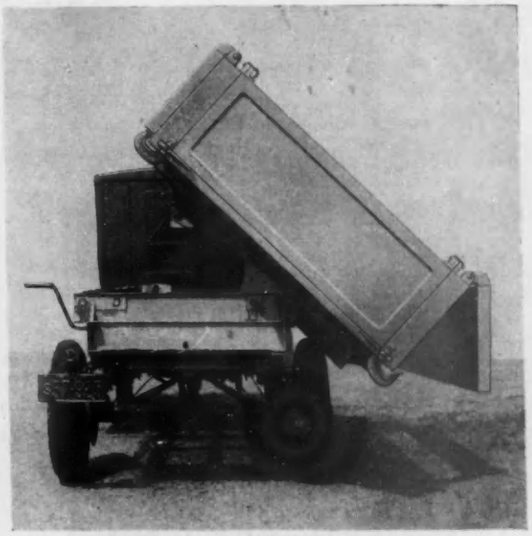

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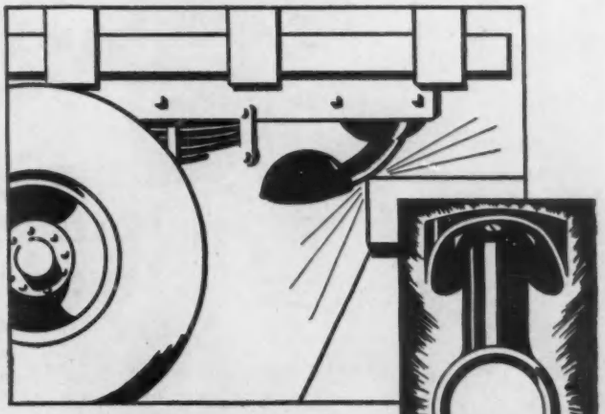

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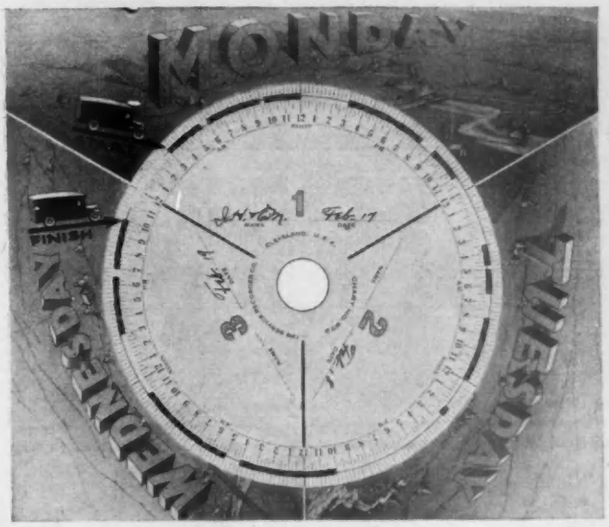

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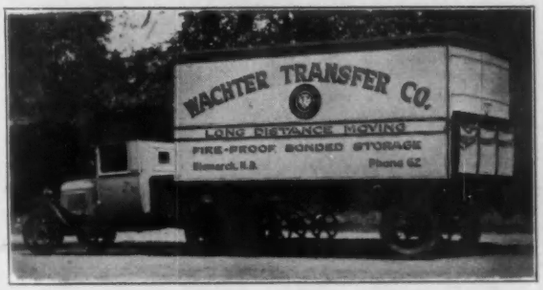

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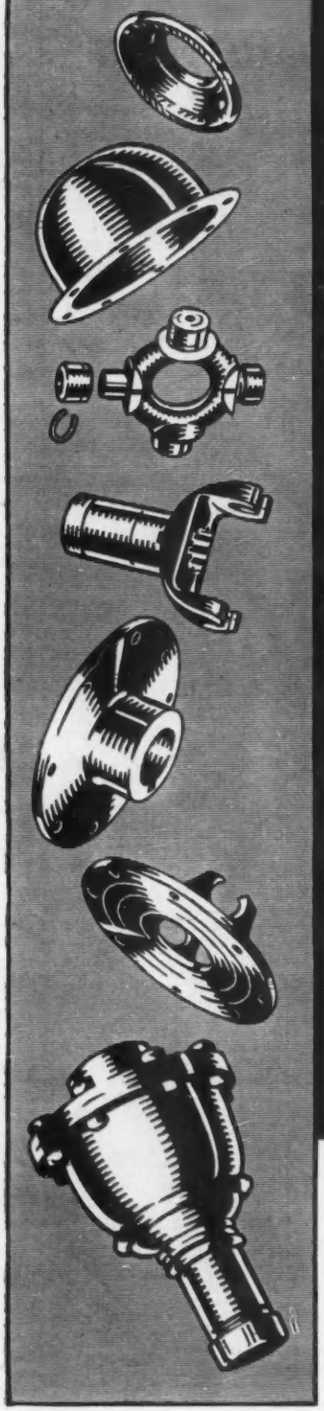

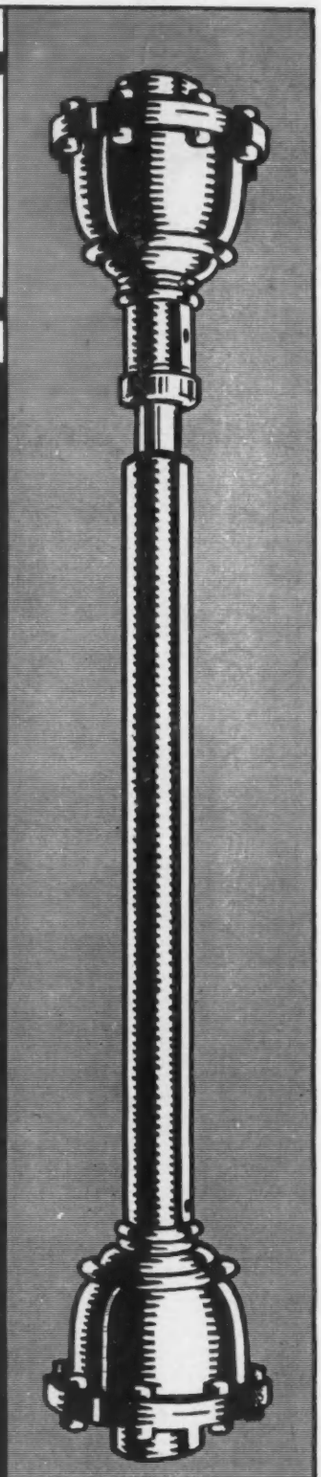

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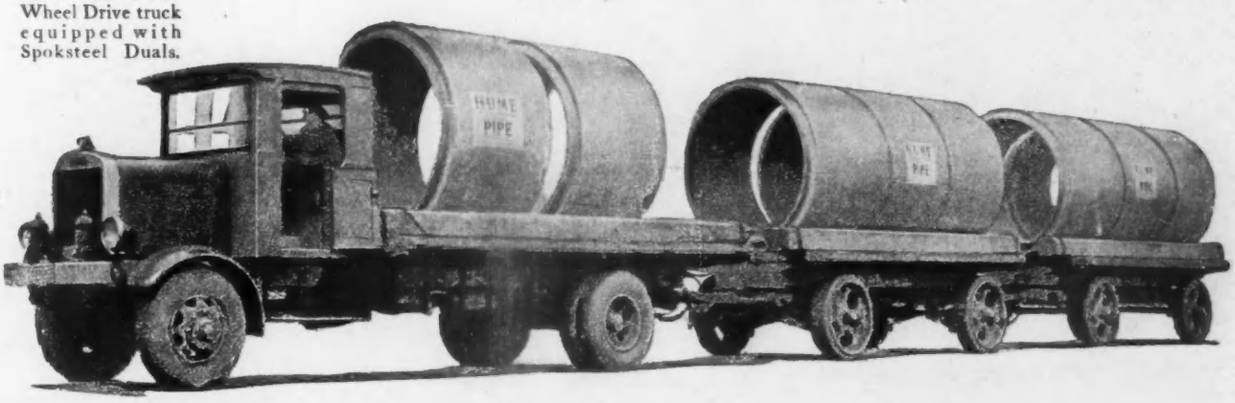

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